

Redefining Student Basic Needs for Higher Education

A Study to Understand and Map University of California Student Basic Needs



How do we redesign
our educational
institutions to better
embody and promote
Justice and Equity
for students while
supporting their
basic student needs?



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A Study to Understand and Map University of California Student Basic Need

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THE LANDSCAPE

- 6 Executive Summary
- 8 UC Global Food Initiative targets food security
- 10 UC Global Food Initiative explores housing security
- 11 Moving Forward on the Issue

THE STUDY

- 13 Abstract
- 14 Introduction
- 18 Methods
- 21 Qualitative analysis

THE TAKEAWAYS

- 23 Study findings
- 28 Discussion
- 46 Conclusion
- 47 COVID-19 Statement
- 48 End Notes

This report was made possible by funding from the University of California (UC) Office of the President Global Food Initiative. The University of California Global Food Initiative addresses one of the critical issues of our time: how to sustainably and nutritiously feed a growing world population by leveraging the University of California research, outreach and operations. By building on existing efforts and creating new collaborations among UC's 10 campuses, affiliated national laboratories and the Division of Agriculture and Natural Resources, the Global Food Initiative is working to develop and export solutions for food security, health and sustainability throughout California, the United States and the world. For more information, visit: ucop.edu/global-food-initiative.

ACKNOWLEDGEMENTS

This study was funded by the UC Global Food Initiative. Special thanks to UC Campus Basic Needs Committees at UC Irvine, UC Santa Cruz, UC San Francisco, UC Berkeley, and UC Merced and the UC Systemwide Basic Needs Committee Co-Chairs (Tim Galarneau and Ruben E. Canedo). Extended thanks to California State University researchers for their expert review (Rashida Crutchfield, Jennifer Maguire, and Aydin Nazmi), and Gale Sheean-Remotto, Eli Jimenez and Danielle Lee. And gratitude to Christopher Paguio and Celery Design Collaborative for their illustrations and graphic designs for this report.

For general info about the UC Global Food Initiative, please go to ucop.edu/global-food-initiative/index.html.

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THE LANDSCAPE

Meeting the basic needs of food and housing security is a multidimensional challenge for communities across the country, including those in higher education.★

Executive Summary

Meeting the basic needs of food and housing security is a multidimensional challenge for communities across the country, including those in higher education. Today, expenses other than tuition can account for more than 60 percent of the total cost of attending a college or university.¹ Over the past four decades, the cost of living for college students has increased by over 80 percent.²

The University of California (UC) is dedicated to ensuring the success of its more than 260,000 students and as such, has embarked on a comprehensive effort on how to identify, assess and help solve the housing and food security challenges students experience. UC has been focused on food security since the inception of the UC Global Food Initiative in 2014 and has been instrumental in shaping the state and national conversation around students' basic needs challenges.

One of the fundamental issues related to the question of housing security is the existence of a recognized or validated set of questions that national, state and scholarly researchers agree upon as an accurate survey instrument.

In 2018, as part of a GFI funded project, a housing insecurity study was commissioned, "Defining Student Basic Needs in Higher Education: An Exploratory Study on Housing and Food Insecurity Among University of California Students." The purpose of the proposed study outlined in the following pages is twofold: 1) to explore the issue of student housing insecurity across our UC campus communities, and 2) to develop, vet and validate housing-related questions to accurately measure housing security.

FIG 1. TOTAL COST OF ATTENDING COLLEGE

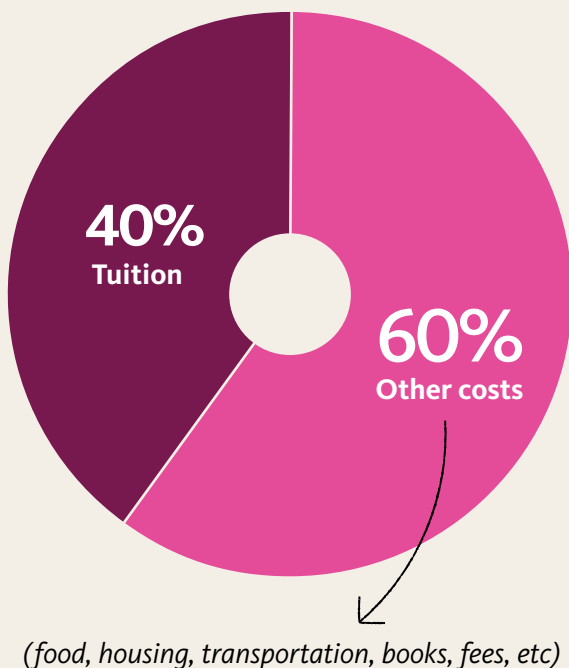
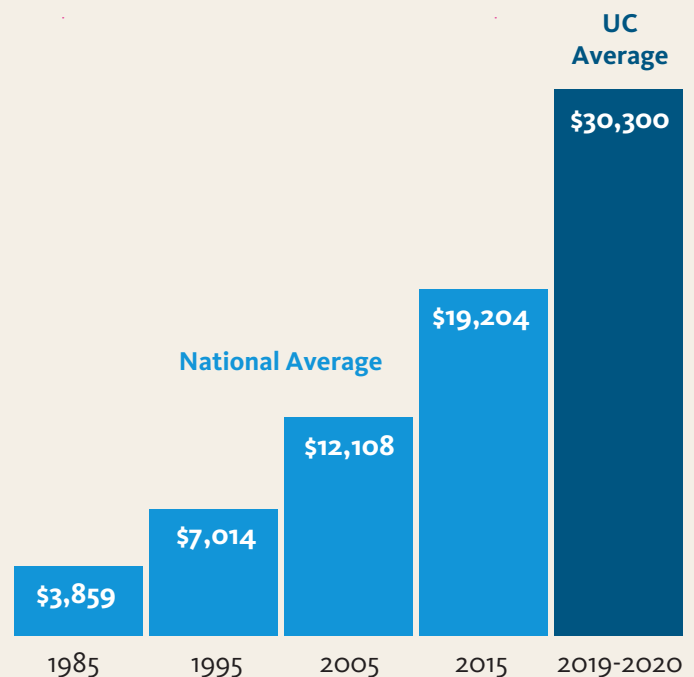


FIG 2. COST OF LIVING FOR COLLEGE STUDENTS

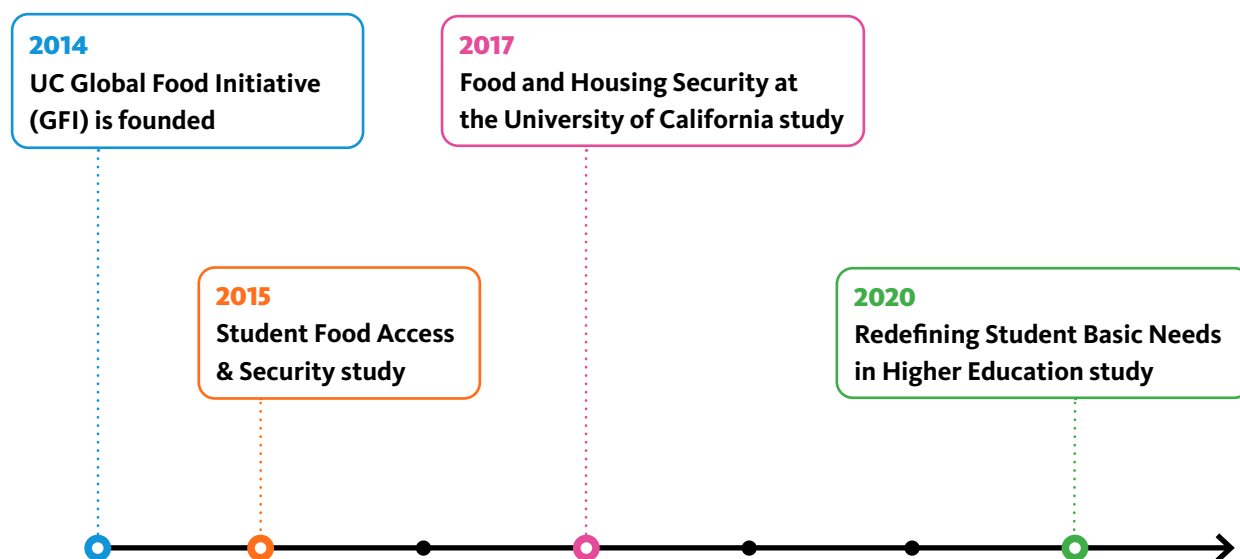
Average tuition and fees and room & board for undergraduates living on-campus.



* Source: <https://nces.ed.gov/...>

** Estimated cost for CA residents, on-campus. Source: <https://admission.universityofcalifornia.edu/...>

FIG 3. TIMELINE OF UC GLOBAL FOOD INITIATIVE STUDIES



The study builds on two earlier studies all funded by the GFI:

- the 2015 Student Food Access and Security Survey (SFASS)³ which was the nation's largest higher education study at the time report; and,
- the 2017 Global Food Initiative: Food and Housing Security at the University of California⁴ which highlighted 48 percent of the Universities undergraduates and 25 percent of its graduate students experience some level of food insecurity and five percent of undergraduates experience homelessness, with a broad definition that ranged from "couch surfing" to "living on the streets."

To date, there is no agreement nationally on an assessment tool to evaluate housing security. Through cognitive interviews using existing housing insecurity items, this exploratory study aims to identify and analyze sources of response error in existing housing insecurity survey items among UC students from three UC campuses and develop survey questions for future use. This approach will allow UC to gather critical data on the issues students are facing to meet their basic

housing needs and identify survey questions to better characterize students who are experiencing unstable and unsafe housing. The identified questions can be further used locally and nationally as a validated assessment tool on housing insecurity.

The research findings outlined within this report captured a broader definition of basic needs to include not only food and housing but mental health, sleep, hygiene, and transportation. The outcome of the survey can lend support to pilot test items within UC's institutional survey tools such as the UC student experience surveys or in more global tool used nationally. Including a more valid assessment of housing insecurity across the UC system, which this study aims to support, is critical for positioning UC to better address holistically our student's basic needs.

The University has taken numerous steps over the past five years to explore ways in which it can capture data to provide a clearer picture of the basic needs issues experienced by UC students. This data informs how UC can work towards solutions that increase the opportunity for a more equitable and successful college experience for its neediest of students.

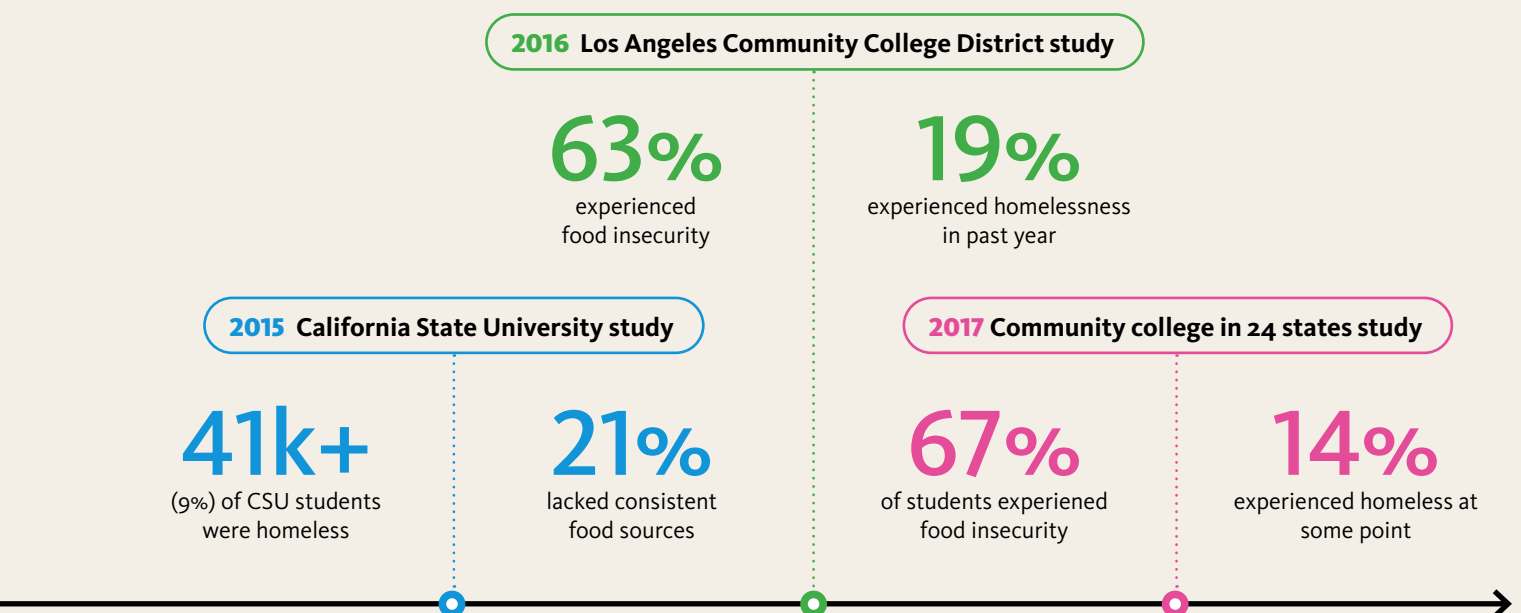
UC Global Food Initiative targets basic needs

UC launched the Global Food Initiative (GFI) in 2014 to address one of the critical issues of our time: how to sustainably and nutritiously feed a world population that is expected to reach 8 billion people by 2025. The initiative aligns the University's research, outreach and operations in a sustained effort to develop, demonstrate and export solutions for food security, health and sustainability throughout California, the United States and the world. Student food security was an early focus of the GFI.

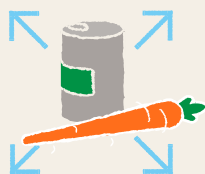
Universities and other institutions across the state and country are working to better understand students' basic needs. Research indicates that the challenges students face are problems not only in California, but also across the nation. Some of the salient findings among recent studies include:

- A 2015 study by California State University that suggests nine percent of CSU's 460,000 students were homeless, while 21 percent lacked consistent food sources.⁵
- A 2016 study by the Los Angeles Community College District (LACCD) that found 63 percent of students surveyed experienced food insecurity, with 38 percent experiencing very low food security. Nineteen percent indicated experiencing homelessness within a year of the time the questionnaire was administered.
- A 2017 survey that included 33,000 students across 70 community colleges in 24 states found that 67 percent of students experienced food insecurity, 50 percent experienced housing insecurity and 14 percent experienced homelessness at some point. Researchers also determined that there was minimal geographic variation in hunger and homelessness among community college students.⁶

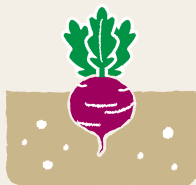
FIG 4. TIMELINE OF BASIC NEEDS STUDIES



The ambitious goal laid out by the GFI has included a systemwide focus on addressing food security among UC students. At the campus level, food security efforts have resulted in the creation of a wide and comprehensive range of resources beginning with each campus establishing a food security working group—that includes students, staff, faculty and community partners—tasked with coordinating campus food security efforts to meet their campus’s unique needs. Some examples of the projects UC campuses have implemented include:



**developing or expanding
campus food pantries;**



**developing or extending
campus gardens;**



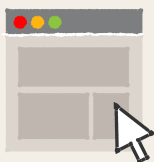
**donating meals through
“Swipe Out Hunger” programs;**



**increasing awareness and education around
the federal Supplemental Nutrition Assistance
Program (known as CalFresh in California)
and hosting enrollment drives;**



**creating a Student Food Access & Security Toolkit
that includes best practices and activities
developed by UC campuses, sharing key strategies
and programs that nourish and support students;**



**creating campus basic
needs websites and
awareness campaigns;**



**increased efforts to enhance
financial aid literacy for current
and incoming UC students;**



**sharing evidence-based practices
to better support students and their
basic needs across the state;**



**engaging and facilitating intersegmental leadership
meetings with California Community Colleges (CCC)
and California State University (CSU) representatives;**



**and engaging with advocates, legislators and
policy makers to address long-term changes.**

These are just some of the examples the University has invested in to support students and the project efforts have expanded to include basic needs.

UC explores housing insecurity

The University of California has also addressed basic needs challenges by working systemwide to ensure sufficient and affordable student housing. Since the start of President Janet Napolitano’s tenure at UC, more than 17,000 beds have been added systemwide. UC launched its Student Housing Initiative in January 2016 to add 14,000 beds by fall 2020. UC is on track to exceed that goal with 15,000 beds. UC is on track to exceed that goal with 15,000 beds across the system between 2021 and 2025. The initiative aims to ensure each of the UC campuses has sufficient housing for its growing populace and to keep housing as affordable as possible for UC students.

As part of its comprehensive approach to student well-being, in 2016 UC proactively started examining the housing challenges students face. Current data in this area are limited at both the state and national level. Nevertheless, UC took a first internal step of preliminarily assessing housing challenges by including one question on homelessness in its 2016 University of California Undergraduate Experience Survey (UCUES) and Graduate Student Wellbeing Survey (GSWBS) surveys:

“Since attending UC, have you ever been homeless for any of the following lengths of time (check all that apply)? (Homeless means not having stable or reliable housing, e.g., living on the street, in vehicles, motels, campgrounds, single-occupancy facilities, or couch surfing in other people’s homes for temporary sleeping arrangements).”

At the time, it was not possible to fully validate the question and no nationally accepted definition of “homelessness” existed to ensure an accurate measurement when the survey was distributed. The survey results from this single question indicated:

- Five percent of both UC undergraduate and graduate student populations said they had experienced homelessness at some point during their enrollment.
- The definition of homelessness in the UC question provided responses ranging from “couch surfing” at a friend’s place to living on the streets.

PHASE 1 – SUMMARY OF FINDINGS

The refined survey included four modules:

1 **Students’ current and past living situations**
(17 items)

3 **Overcrowding issues**
(6 items)

2 **Housing insecurity and challenges students encountered around housing**
(21 items)

4 **Food insecurity timing and issues regarding basic needs security**
(21 items)

Moving forward on the issue

UC continues to gather data and explore the issue of basic needs to support our student’s academic success. The 10 UC campuses remain engaged through their basic needs working groups, developing implementation plans and designing programs and services to support student’s basic needs. UCOP’s Institutional Research and Academic Planning (IRAP) team have been instrumental in sharing data that assist campuses with identifying specific populations to create stronger outreach programs. Based on the findings of this present study, Defining Student Basic Needs in Higher Education, IRAP can assess what housing security questions to include in future survey instruments to further these efforts.

In 2018, the Regents established a Special Committee on Basic Needs charged with reviewing national trends on efforts to address food, housing and financial insecurity. The Defining Student Basic Needs in Higher Education exploratory study will be part of this review process. In 2020, the committee will issue a report that will guide

the University’s strategic vision and recommend a set of long-term goals to address basic needs.

Along with UC’s efforts, the State of California has worked to ensure that programs available to assist Californians’ basic food needs are also accessible for UC and other college students. The California Legislature has adopted and funded a number of proposals over recent years focused on food assistance for students enrolled in higher education institutions. In 2019, following systemwide advocacy and direct lobbying by students, the State legislature recognized the growing challenges of students’ basic needs and created permanent funding for campuses to design programs and services to support our populations most in need.⁷ UC campuses basic needs working groups will focus on leveraging these important resources to further their investments in infrastructure and programs that help support student basic needs.

PHASE 2 – SUMMARY OF FINDINGS

A total of eight themes were identified:

1 Student definition of basic needs is more than minimal food and shelter	3 Housing is a priority over food that leads to food insecurity	5 Nontraditional students and graduate students face unique challenges	7 Fees further add to basic needs insecurity
2 Students encounter multifaceted issues regarding housing insecurity	4 Transportation barriers interfere with meeting students’ basic needs	6 Limited financial aid is a barrier to meeting students’ basic needs	8 University basic needs services are essential and should be expanded and strengthened to make services more easily accessible.

THE STUDY

Defining Student Basic Needs in Higher Education: An Exploratory Study on Housing and Food Insecurity among University of California Students

Authors: Suzanna Martinez, Erin Esaryk, Laurel Moffat, Lorrene Ritchie

Abstract

Background

As the total cost of higher education continues to increase across the United States, concern is growing around housing insecurity and homelessness among college students. While some researchers have begun to quantify the extent of the problem, survey tools for assessing student housing insecurity and homelessness have not been validated, and there is no standardized definition of student housing insecurity. Validated and standardized survey instruments are necessary to provide governments and universities with reliable and accurate data to address student housing insecurity.

Objective

To document the experience of housing insecurity among University of California (UC) students and to pilot student housing insecurity and homelessness survey instruments.

Design

In Phase 1, a student housing insecurity survey was adapted from existing tools, and cognitive interviews were conducted with UC students to assess their comprehension of the survey questions. The survey tool was updated based on student feedback and recommendations. In Phase 2, in-depth qualitative focus groups were conducted with the students to understand their experiences of housing insecurity and their perceptions of its impact on health, social life and academic performance. Focus groups were recorded, transcribed and reviewed to identify themes.

Participants/setting

Fifty-eight undergraduate and graduate students were recruited from the basic needs resource centers from five UC campuses. Trained facilitators led a total of 11 ninety-minute focus groups at each campus with 3-8 students each.

Results

PHASE 1

The refined survey tool included four modules: students' current and past living situations (17 items); housing insecurity and challenges students encountered around housing (21 items); overcrowding issues (6 items); food insecurity timing and issues regarding basic needs security (21 items).

PHASE 2

A total of eight themes were identified: 1) Student definition of basic needs is more than minimal food and shelter, 2) Students encounter multifaceted issues regarding housing insecurity, 3) Housing is a priority over food that leads to food insecurity, 4) Transportation barriers interfere with meeting students' basic needs, 5) nontraditional students and graduate students face unique challenges, 6) Limited financial aid is a barrier to meeting students' basic needs, 7) Fees further add to basic needs insecurity, and 8) University basic needs services are essential and should be expanded and strengthened to make services more easily accessible.

Conclusion

A student-informed definition of basic needs included mental health, sleep, hygiene, and transportation, in addition to food and housing. The housing issues that students faced were often related to unaffordable housing and structural issues that were beyond their control, which exceeded their ability to cope. As tools to assess housing insecurity are further refined, these issues should be addressed. Recommendations for addressing student basic needs should use this student-informed definition of basic needs and housing security to create services that enable all students be successful in higher education.

Introduction

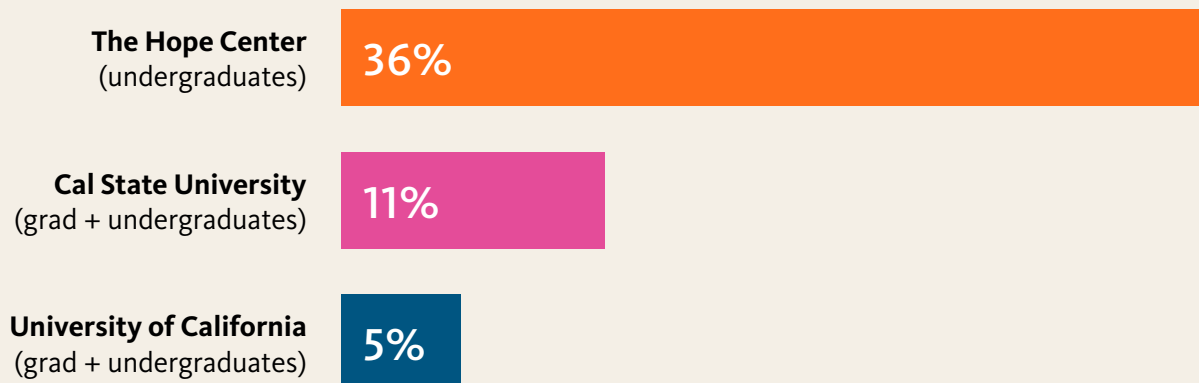
While basic needs is an established concept, it is relatively unfamiliar and understudied in the context of higher education. The term traditionally refers to food, shelter and clothing, with more recent definitions including sanitation, education, and healthcare access. For the purpose of this report, we discuss basic needs as it relates to higher education.

To date, research on student basic needs has had a greater emphasis on responding to food insecurity. The 10-campus University of California (UC) system has been tracking student food insecurity rates since 2015. These surveys found that between 2015 and 2018, 40% of UC students reported food insecurity in the past 12 months. The Hope Center (formerly the Hope Lab) and California State University (CSU) system conducted similar studies among students attending community and state colleges and found that 36% and 42%, respectively, of the students surveyed experienced food insecurity in the last 30 days.^{8,9} According to a systematic review and a recent Government Accountability Office report, food insecurity among post-secondary students is well above 30%, and is likely closer to 44% in the United States.¹⁰ These estimates rely on the USDA's validated food insecurity screening tool, including short (6-items) and long (10-items) forms.

We know far less about other basic needs among college students, particularly housing. A few studies released in 2017 estimated student housing insecurity and homelessness, but none used a standardized definition or measurement tool.

- The Hope Center found that 36% of undergraduate students from a national convenience sample experienced housing insecurity in the last year (defined as experiencing a challenging housing situation).⁸
- In the 23-campus CSU system, 11% of undergraduate and graduate students experienced homelessness in the last year (defined as experiencing homelessness one or more times in the last 12 months).¹²
- In the UC system, 5% of undergraduate and graduate students experienced homelessness in the last year (defined as experiencing homelessness once in the last 12 months). Among undergraduates, 3% of first-year students experienced homelessness and up to 15% of 5th-year students experienced homelessness (defined as experiencing homelessness once in the last 12 months).¹³

FIG 5. HOMELESSNESS WITHIN COLLEGE STUDENTS DURING THE PAST YEAR



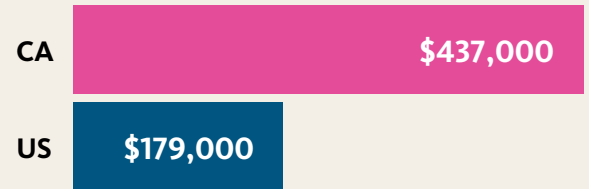
Homelessness is an extreme case of housing insecurity, and college students may be particularly vulnerable to homelessness given reductions in housing affordability near campuses. Furthermore, rising tuition costs along with predatory housing practices exacerbate the student living situation. Below, we summarize the current state of California's housing and how students fit into that context.

Since the 1970s, California has faced a major housing crisis characterized by high rents and home prices. The median home price is nearly three times the national average, and rents are 50% higher.¹⁴ These high housing costs are driven by a housing shortage and costly housing construction (the highest in the nation) that have not kept up with the demand for housing across the state.¹⁶ In 2018, only 30% of adults in California could afford to buy a home compared to the 53% of the population that can afford a home nationally.¹⁵ Rising coastal housing prices push residents further from city centers, increasing commute times as well as suburban housing costs.¹⁶ Further, the housing shortage causes overcrowding. The California Legislative Analyst Office reported that Californians are four times more likely to live in crowded housing due to the high cost of housing than the rest of the U.S.¹⁶ Increasing costs also displace residents who can no longer afford housing, contributing to high rates of homelessness and housing insecurity.¹⁶ From 2016 to 2017, the total number of individuals experiencing homelessness increased by 14% in California.¹⁶ In 2018, according to the U.S. Department of Housing and Urban Development, "California accounted for 30 percent of all people experiencing homelessness as individuals in the United States and 49 percent of all unsheltered individuals."¹⁷ Of those who experienced homelessness in California, 2% were unaccompanied young adults between the ages of 18 and 24 years. These estimates for California are the highest in the nation.

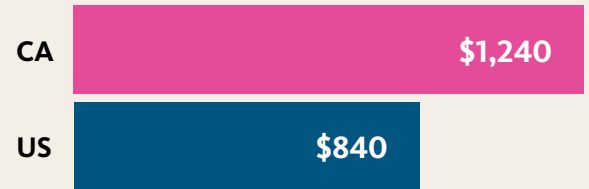
THE HOUSING CRISIS

California (■) and United States (■) comparison

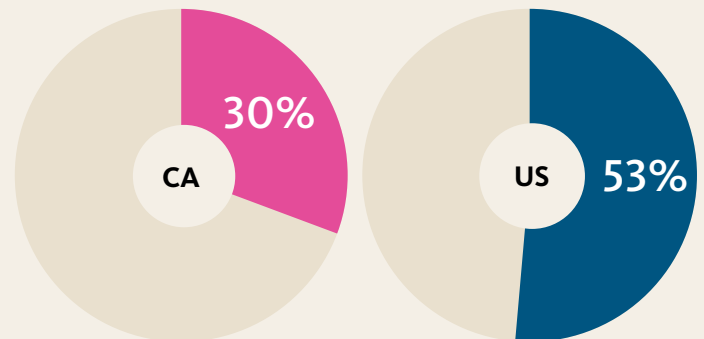
Average median home price



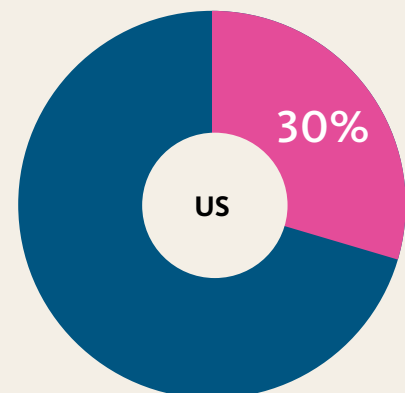
Average monthly rent



Ability of adults to buy a home



Homelessness in America



homelessness* noun

lacking a fixed, regular, and adequate nighttime residence
(e.g., motel, car, tent, etc.)

* McKinney Vento Act definition of homelessness among youth

College students, like other adults, are vulnerable to housing challenges. With rising tuition, fees, and cost of living, students face significant increases to the cost of attending college.¹⁸ At the same time, state and federal support for tuition have drastically declined, leading to steep increases in fees.¹⁹ The cost of attendance (tuition, room and board, books, transportation, medical expenses) for California colleges has never been higher.²⁰ Federal Pell grants, which covered most of the tuition for low-income students in the 1990s, now cover only one-third of the average cost of attendance.²¹ Many of the UC campuses are located in coastal areas where real estate prices are among the highest in the state. The high cost of living combined with the rising tuition prices undermine students' ability to meet their basic needs, particularly housing and food.

Today's students are also less likely to have the resources needed to cope with rising costs. Unlike in past generations, college students increasingly come from low-income families and from minority groups.²² Nearly half of all UC students are 'first generation', meaning they are the first in their family working to achieve a four-year academic degree.²³ Approximately 38% of University of California students receive Pell Grants (2017-2018), federal awards reserved for low-income students. Such students may be less likely than higher income students to have family financial support and may struggle to cover the cost of college attendance. When full-time students work more than 15 hours a week, they are less likely to graduate.²⁵

Researchers are beginning to quantify the extent of these challenges. However, the lack of a standard definition of housing insecurity in higher education

makes it difficult to accurately quantify the prevalence of housing insecurity and homelessness among students. In the larger literature of housing insecurity, housing stability has been defined as a multidimensional construct that is assessed in terms of threats to housing insecurity, and the extent to which an individual's usual access to housing (of reasonable quality) is secure.²⁶ Other definitions of housing insecurity include a wide array of housing problems, such as difficulty paying rent, moving frequently or being worried about housing. The lack of a clear definition of housing insecurity, particularly among college students, likely contributes to variation in prevalence estimates. The Hope Center and CSU used respective surveys to assess student housing insecurity and homelessness, but neither are accepted as standard. The Hope Center adapted a six-point housing insecurity module from the U.S. Survey of Income and Program Participation (SIPP) to assess housing insecurity, including questions on eviction, rent increases and crowding.²⁷ CSU used definitions of homelessness from the Housing and Urban Development (HUD) and the Department of Education (DOE) McKinney Vento Act to formulate their student homelessness experience questions.²⁸ The McKinney Vento Act definition of homelessness among youth includes lacking a fixed, regular, and adequate nighttime residence (e.g., motel, car, tent, etc.), whereas HUD's definition is based on self-report of homelessness.²⁹ The University of Southern California also adopted HUD's and the DOE's definitions of homelessness in higher education.³⁰

These discrepancies in survey questions to assess housing insecurity make direct comparisons difficult

and make it impossible to quantify the extent of the problem nationally. To understand the prevalence of homelessness and housing insecurity, tools must be refined, validated and standardized. To our knowledge, an instrument to consistently measure housing insecurity among college students is lacking.

California's lack of affordable housing creates financial pressure for students that not only threatens their

financial and housing security, but also their academic success. Because students' academic success depends upon their ability to meet their basic needs,³¹ in 2018, the UC President's Global Food Initiative funded this study. The current study had two objectives: 1) to explore the issue of housing and food insecurity and homelessness among UC students; and 2) to develop validated survey questions for future use.



UCSC Graduate Students Striking for Increased Cost of Living Adjustment. Credit: Twitter/@PAYUSMOREUCSC

Methods

This study was conducted at five UC campuses: Berkeley (UCB), Irvine (UCI), Merced (UCM), Santa Cruz (UCSC), and San Francisco (UCSF). These campuses were selected based on several criteria: UCI and UCSC may have among the highest prevalence of homelessness in the UC system; UCM is in a rural area; UCSF serves graduate and professional students; and UCB serves undergraduates. Furthermore, UCSF and UCB are amongst the cities with the highest cost of living in the nation.

Study participants were recruited from basic needs centers or food pantries on respective campuses, which each campus had previously established in response

to high levels of food insecurity. Basic needs staff and volunteers at each site connected with students through social media, fliers, listserv emails, and snowball sampling. Students were eligible if they were 1) 18 years of age or older; 2) currently enrolled in a UC undergraduate or graduate program; and 3) utilized the basic needs center on their campus (to ensure that the sample was addressing basic needs issues). Students received a meal and a \$20 gift card as an incentive for participating. Each participant provided written informed consent. This study was approved by the Institutional Review Board at the University of California, Davis.

The research team merged existing survey questions on student housing insecurity and homelessness into a single survey and used this hybrid version in the focus groups. Questions included came from SIPP (used by The Hope Center), and from HUD and the DOE (used by CSU).³² The research team added additional questions on student housing insecurity. Before pilot testing, student housing insecurity experts and basic needs staff on each campus provided input on both the housing and homelessness survey and focus group guide.

Group sessions were divided into two phases based on the two study objectives. In Phase 1, students completed the housing insecurity survey in a cognitive interview style, then immediately after, students participated in focus groups as part of Phase 2. A total of 11 group sessions (ranging from 3-8 students each) were conducted with a total of 58 students across all five campuses in February and March of 2019. Up to three sessions were conducted at each campus. Participants were a mix of undergraduate and graduate students with the majority of graduate student participants attending UCSF and UCI. Sessions at other universities were comprised of mostly undergraduate students.

Each session was led by a facilitator and included a notetaker, and all discussions were audio-recorded. Each student signed an informed consent form and completed an online demographic survey that included

the 6-item USDA food insecurity questions.³³ In Phase 1, students completed the housing and homelessness survey questions and noted any changes they would make to the survey. Then the facilitator assessed students' comprehension of the questions using the cognitive interview guide. Figure 1 includes details of the cognitive interview guide. In Phase 2, the facilitator led the focus group using a semi-structured focus group guide on housing insecurity experiences. Students discussed their thoughts and feelings about basic needs, including housing and food insecurity, their personal struggles with such insecurity, and whether their struggle impacted their health and academic performance. The focus group facilitator also asked the students about their current housing situation and the reasons for being in this situation. Finally, students were asked to discuss their experiences with basic needs efforts on each campus and what programs they would like to see in the future to help students meet their basic needs. Figure 2 includes details on the focus group discussion guide. Participants were given a number that they repeated each time they spoke in order to identify the speaker on the audio-recording. Each focus group lasted approximately 90 minutes and was conducted in a private location on campus, in most cases close to the basic needs center or food pantry. Focus group discussions were later transcribed verbatim.

Qualitative Analysis

Two authors (E.E. and S.M.) employed an integrated approach using an inductive (ground-up) development of codes and themes and a deductive framework for organizing the codes according to the literature and interview guide. This process involved an initial identification of themes, reviewing focus group notes, audio recordings, and written transcriptions. After finalizing the coding scheme, two authors (E.E. and L.M.) used Atlas.ti Version 8.4.2 (2019, Scientific Software Development GmbH, Berlin) to code quotations within the transcripts and indicate

potential patterns that emerged from the participants' discussions. Different codes could be applied to the same segment of dialogue. After E.E. and L.M. coded all transcripts, S.M. reviewed all coding for discrepancies and worked with E.E. and L.M. to reach consensus on coding discrepancies.

FIG 6. PHASE 1: COGNITIVE INTERVIEW GUIDE

For assessing comprehension, acceptance and appropriateness of questions to assess housing insecurity and homelessness among students.

Assessing comprehension

Do you understand all of the words?

Assess the clarity of the questions

What do you think is being asked?
What does this question mean to you?

Ask to describe how they would have asked this question in their own words

If you were asking this question to a friend or family member, how would you ask it?

Additional questions to include in the survey

What else would you ask that is important to ask about housing and food insecurity?

Enquire how the questions were answered

Describe any thoughts as you answer the questions.

Determine if additional help is needed in answering the questions such as definitions and examples

What types of examples might help others to understand this question?

Emotional response to the survey questions

How did the questions make you feel?
What kind of emotions did it make you feel (embarrassment, shame, frustration)?

Additional question responses

Would you prefer to have different answers to pick from?

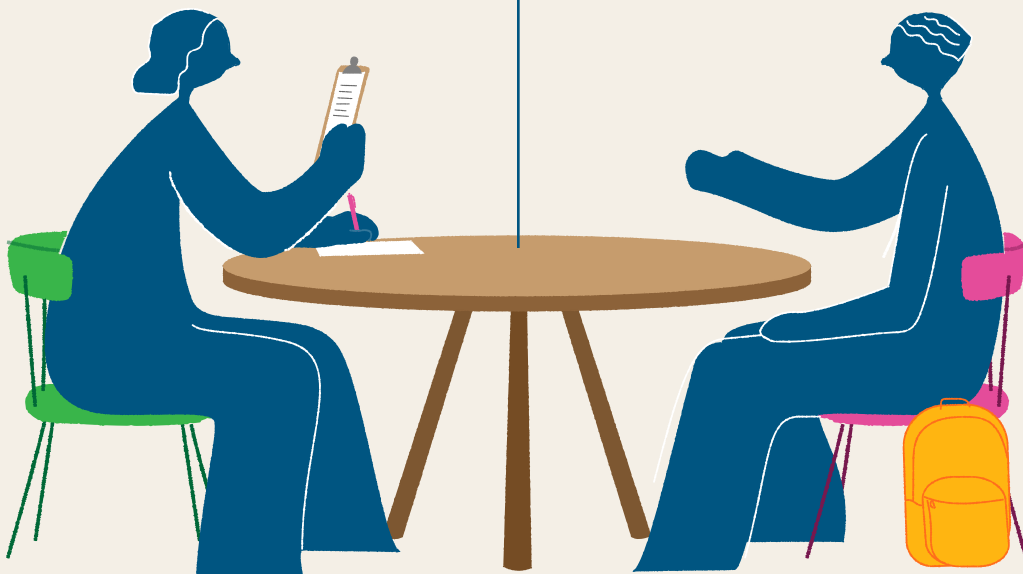


FIG 7. PHASE 2: FOCUS GROUP QUESTIONS

*Used to guide discussions student basic needs
with 58 students at the University of California.*



FOCUS GROUP QUESTIONS

- 1) What does the concept of basic needs mean to you?
- 2) In your opinion, whose responsibility is that your basic needs are met? What informs your response?
- 3) What is your current living situations/arrangement?
- 4) In what ways are your basic needs met or not met?
- 5) What are some of the reasons you are in this current living situation?
- 6) Have you ever received housing and/or food assistance from the basic needs center at your university? If so, what kind of assistance did you receive?
- 7) How can we prepare future generations of college students for the basic needs experience of their college years?
- 8) If you could send your high school self a message or advice about meeting your food or housing needs while in college, what would you say?

THE TAKEAWAYS

Much work remains in achieving equity regarding student basic needs. Future progress toward equity will require moving beyond minimal food and housing to more holistic definitions of student basic needs.

Study Findings

Student participants

A total of 58 students participated in 11 sessions including Phase 1 (i.e., cognitive interviews) and Phase 2 (i.e., focus groups) research. Students were from: UCI (29%), UCB (24%), UCM (19%), UCSC (9%) and UCSF (19%). Participants ranged from 18 to 54 years old with an average age of 23 and were predominantly female (76%). The focus groups included undergraduate (64%), and graduate or professional students (36%). Students self-identified as Asian (33%), Latino/a (21%), White (18%) or Black (12%). Student characteristics are summarized in Table 1.

Among the undergraduates in the sample, 45% received the Federal Pell Grant as part of their financial aid package (available to students of low-income backgrounds). Of the 33 participants considered to be dependents according to financial aid, 53% came from families that earned less than \$50k in the last year. A total of 25 students were financially independent and reported earning less than \$50k in the last year. More than half of the participants (52%) came from households in which neither parent had completed a four-year degree, i.e., the first-generation in their family to attend college.

Among the total student sample, the three most common living arrangements at the time of the survey

were in a house off campus (37%), in an apartment or studio (26%) and living in a UC residence hall (23%). The remaining student participants (18%) lived either with their parents, in a house or other place not listed. No students reported living in an owned home or not having a residence at the time of the survey.

When students were asked about homelessness, 24% reported that they had experienced homelessness since attending UC. Additionally, students were asked to report if they had ever experienced an extreme housing situation regarded as homelessness according to the McKinney Vento Act. In the last 30 days, 7% of students had an experience defined as homelessness, which included in a shelter, in a camper, couch surfing, temporarily in a hotel or motel, on campus (non-residential), an outdoor location, and in an indoor area not meant for human habitation. In the last 12 months, 26% of students had an experience defined as homelessness, which included in a camper, couch surfing, on campus (non-residential), in a hotel/motel, transitional housing, treatment center, outside, or in an indoor area not meant for habitation. The most common time that students reported these experiences was during the academic year (fall or spring terms) (47%), followed by summer with school in session (27%), summer while not taking classes (20%) and winter break (6%).

FIG 8. HOMELESSNESS BY SEASON

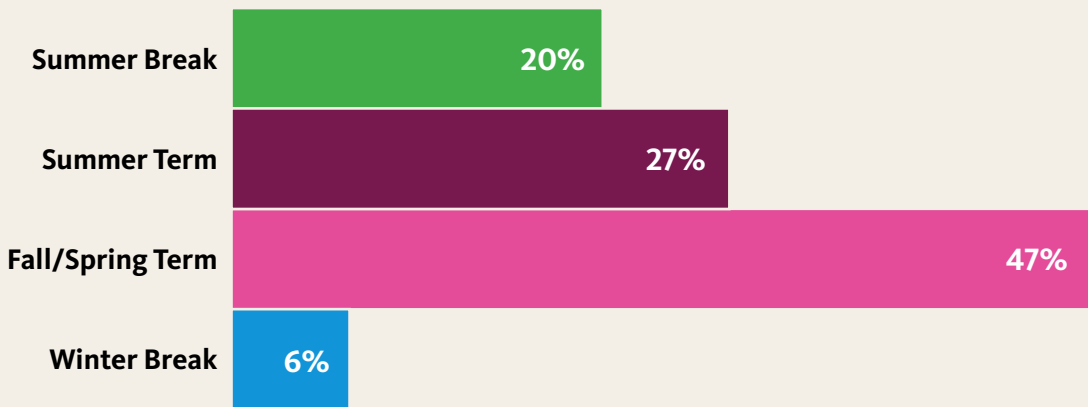


TABLE 1. SOCIODEMOGRAPHICS OF FOCUS GROUP PARTICIPANTS

	Total Sample		Undergraduate		Graduate	
	n = 58		n = 37		n = 21	
Campus affiliation	Frequency	%	Frequency	%	Frequency	%
UC Berkeley	14	24%	12	32%	2	9%
UC Irvine	17	29%	9	24%	8	38%
UC Merced	11	19%	11	11%	0	0%
UC Santa Cruz	5	9%	5	13%	0	0%
UC San Francisco	11	19%	n/a	n/a	11	52%
Race Ethnicity						
White	10	17%	6	16%	4	19%
Black	7	12%	4	11%	3	14%
Latino/a	12	21%	11	30%	1	5%
Asian	19	33%	11	30%	8	38%
Pacific islander	1	2%	1	3%	0	0%
Middle Eastern	2	3%	0	0%	2	9%
Mixed race/ethnicity	6	10%	4	11%	2	9%
Gender						
Female	44	76%	29	78%	15	71%
Male	13	22%	7	19%	6	29%
Non-binary or other	1	2%	1	3%	0	0%
Age (mean, standard deviation)	23.6 (5.8)		21.1 (3.0)		28 (6.9)	
Sexual Orientation						
Heterosexual	48	83%	30	81%	18	86%
LGBTQ	9	16%	7	19%	2	10%
Employment status						
Not employed	26	45%	18	51%	7	33%
< 20 hours per week	20	34%	12	32%	8	38%
≥ 20-29 hours per week	8	14%	5	14%	3	14%
≥ 30-39 hours per week	4	7%	1	3%	3	14%
Received Pell grant*	17	46%	17	46%	n/a	n/a
First-generation (neither parent completed a 4-year degree)	30	52%	24	65%	6	29%
Financially independent	25	43%	9	24%	16	76%
Financially dependent with a family income < \$50K**	17	53%	13	46%	4	80%
Food insecurity in the last 12 mos.	57	98%	36	97%	21	100%
Homelessness since attending UC†	14	24%	10	27%	4	19%
Homelessness in the last 30 days††	4	7%	3	8%	1	5%
Homelessness in the last 12 months††	15	26%	9	24%	6	29%

Note: Percentages may not add up to 100 if students selected unknown.

* Undergraduates only;

** 28 undergraduate and 5 graduate students were financially dependent;

† Self-reported experience of homelessness since attending UC; and

†† Homelessness defined as reporting any experience of sleeping in a shelter, camper, couch surfing, temporarily on-campus, temporarily at a hotel, outdoor location or in a closed area with a roof not meant for human habitation.

Students answered seven questions regarding housing insecurity in the last 30 days and the last 12 months. Rent or mortgage increase was the most commonly reported indicator of housing insecurity, an experience common to 43% of students in the prior 12 months. Other indicators of housing insecurity included being evicted, not being able to pay the full amount of a utility bill, moving in with others due to financial problems, living beyond the expected capacity of your home, being asked to leave your home by someone else in the household, and not knowing where you were going to sleep even for one night.

The average number of moves in the last year was nearly 2 (1.8, SD 1.3) and financial reasons were cited as the most common reason for moving. On average, students shared a room with one other roommate, and 17% reported having less than 50 square feet of personal living space, which is approximately the size of a car parking space.

PHASE 1

Cognitive interviews revealed discrepancies in existing questions used to assess housing insecurity, as well as a lack of clarity in the wording and time frames used in the questions. See Appendix A for the original questions presented to students in Phase 1, and Appendix B for the final questions that were refined based on student feedback.

Students provided feedback on the questionnaire to make it clearer, more comprehensive, and better reflective of student experiences. Students recommended including more categories within living situations (e.g., graduate residential/family housing and housing cooperatives were added), particularly for graduate students and those who were married or had a family. Students suggested adding an additional time frame, “any time while attending a UC school”, to the question on locations where students had slept in the last 6- and 12-months. Students also asked for more specificity on whether negative housing experiences occurred while at school or when visiting home. Students brought attention to the stigma regarding the term homeless or homelessness, and recommended questions

on homelessness status and timing be reworded. The questionnaire was adapted to ask instead about lacking a safe, regular, and adequate nighttime place to stay and sleep and to ask about risk of losing a safe, regular, and adequate place to stay and sleep while waiting on a UC housing waitlist. For questions that asked about timing of negative housing experiences, students suggested more flexibility to identify in which academic session the event occurred, such as summer vs. winter vs. spring breaks, and academic holidays and academic terms. Lastly, students recommended including questions on trade-offs and consequences of not being able to afford the full cost of rent. Examples from their experiences included: foregoing transportation, avoiding medical expenses or services, or encountering late fees. Students also suggested including questions on the mental health impact of constantly worrying about covering the cost of rent. The survey was updated based on these recommendations and reviewed by twenty students from across the 10 UC campuses.

The final survey included four modules as described below (Appendix B).

1) **Students’ current and past living situation**

(Module 1, 17 items) – this module is intended to gain a better understanding of a student’s living situation. Questions are framed in terms of the current academic term, in the last 12 months, and any time while attending a UC. Questions ask about current living, places that students have slept, number of moves, and lacking a safe, regular and adequate place to stay and sleep. The term homelessness was removed from these questions to minimize any stigma, as students may not label themselves as homeless. Multiple moves is a strong indicator of food insecurity and poor health, and may be an indicator of more severe housing insecurity.³⁴

2) **Housing insecurity and challenges students encountered around housing**

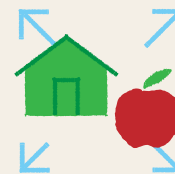
(Module 2, 21 items) – this module is intended to gain a better understanding of the range of issues that students encounter regarding housing as well as timing. Housing insecurity has been shown to be related to poor health and is a marker for food insecurity.³⁵

- 3) **Overcrowding issues** (*Module 3, 6 items*) – this module is intended to gain a better understanding of overcrowding that students may experience when trying to cut housing costs. Overcrowding has been shown to be detrimental to mental health and social relationships, which are counterproductive to academic achievement.^{36,37} Overcrowding may also be a coping mechanism to deal with housing insecurity and risk of homelessness.
- 4) **Food insecurity timing and issues regarding basic needs security** (*Module 4, 21 items*) – this module is intended to gain a better understanding of the timing of when food insecurity occurs. Currently, the USDA measure of food insecurity asks about food insecurity in the last 12 months or last 30 days. However, college students live on an academic year, which makes it difficult to ascertain when students are experiencing food insecurity. Furthermore, commute times to campus and to affordable grocery outlets have been included to gain a better understanding of student circumstances regarding meeting their basic needs.

PHASE 2

During focus group discussions, participants discussed their own definition of student basic needs and their experiences related to housing and food insecurity as a university student. Eight themes emerged from the discussion: 1) Student definition of basic needs is more than minimal food and shelter, 2) Students encounter multifaceted issues regarding housing insecurity, 3) Housing is a priority over food that leads to food insecurity, 4) Transportation barriers interfere with meeting students' basic needs, 5) nontraditional students and graduate students face unique challenges; 6) Limited financial aid is a barrier to meeting students' basic needs, 7) Fees further add to basic needs insecurity, and 8) University basic needs services are essential and should be expanded and strengthened to make services more easily accessible. Appendix C includes key quotes for each theme.

Theme 1:
Student definition
of basic needs is
more than minimal
food and shelter



“Basic needs” encompasses mental and physical wellbeing

Students were asked to define the concept of basic needs. While some felt that basic needs meant the bare minimum to survive, most students described basic needs as having sufficient resources to be the best version of themselves so that they could succeed academically. This included having stable and safe housing and regular access to food, and also not having to worry about affording housing and not experiencing negative consequences due to their housing situation. Some students described constantly calculating whether they would be able to afford their rent, which contributed to mental fatigue and stress. Consequently, students identified mental health and wellbeing as an important basic need, which students often referred to as having a sense of stability or peace of mind. Within the context of housing security, students also spoke about having a place that was “safe enough to sleep” and to sleep uninterrupted. Living somewhere affordable was important because it meant not having to find a more affordable place every few months. Not having to worry about housing translated to being able to focus on academics. Some students also referred to hygiene and a place to shower as components of basic needs.

“To be housing secure means you’re not worrying about housing and it isn’t affecting you in a negative way; such as the long commute from your house or how it affects your safety or otherwise just the stress in the back of your mind.”

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“We’re all very aware that it’s the school’s responsibility, but growing up I was taught to find solutions for myself. So even though we know there’s structural inequities and it’s the university’s fault, I feel as an individual you are always blaming yourself.”

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The University’s defined role in meeting students’ basic needs

In this context of basic needs, students also discussed the University’s responsibility for having their basic needs met. Most students were in agreement that the University is responsible for meeting their basic needs; other students acknowledged that it was also the student’s responsibility while attending UC. Some students felt shame or felt that they were to blame when they were unable to meet their basic needs. Others struggled between feeling grateful to the University for being accepted into a prestigious university program and being disappointed that they were provided with an insufficient financial aid package to meet their needs. Students reported that their feelings of indebtedness prevented them from asking for more funding.

Theme 2: Students encounter multifaceted issues regarding housing insecurity



Coping with housing uncertainty

Students described the instability attached to housing insecurity as one contributor to mental stress. Housing insecurity was stressful and mentally exhausting due to constant worry about affording rent and cost increases, frequent searches for new housing and moves, or having to live a long distance from campus in order to find more affordable housing. Some students were on short-term leases (monthly or 6-month contracts), meaning that property owners could raise the rent

at any time. Annual UC housing contracts were also mentioned as contributing to instability given that students were never certain whether they would be selected for housing in the upcoming year. For students on housing wait lists, it was stressful to coordinate the end of a current lease with signing a new contract so as not to have to pay rent for more than one place at a time or be without housing in-between contracts.

Another issue, especially for graduate students was that housing leases often did not align with graduate student stipend pay schedules. For example, rent was typically due on the first of the month at the beginning of the fall term, but student stipends were not issued until after the first month of the fall term. Furthermore, graduate students in the humanities did not receive stipends over the summer months, which created a gap in funding that made it hard to pay for rent and not lose housing contracts. Securing summer housing was also discussed as an issue for undergraduate students in summer internships.

Homelessness, mostly discussed as couch surfing, further contributed to student stress and worry. Students reported that living temporarily with other students most commonly occurred when they were in between campus housing contracts or leases. Several students described precarious living situations such as sleeping on campus or in a car. Students at UCSC described the Snail Movement, which is an organized group of students who live and sleep in their cars or vans as their primary residence and are requesting overnight safe parking on campus as a way to cope with unaffordable housing.

Some students also discussed the consequences of living in small spaces or in crowded housing (i.e., doubled up) in order to make rent more affordable. The constant flow of people coming in and out due to

the different schedules of multiple roommates created challenges for both studying and sleeping, especially for students living in a living room/common area as a bedroom. Other consequences of too many people sharing the same housing included limited kitchen access and unsanitary bathroom conditions. Students also described dealing with other challenging living conditions in order to avoid a rent increase or to stay under the radar in cases of overcrowding. Conditions included mold, broken or lack of heating, and rodents. One student mentioned living in co-op housing that was infested with scabies where residents were told to wear socks and clothing to prevent further infestation.

Crowding was not limited to off-campus housing. Students discussed university housing shortages and over-enrollment. For example, students reported three to four students living in a single dorm room resulting in a lack of personal space to study and constantly bumping into each other with little room to navigate. One student mentioned living in a converted closet with a structural column in the center of the room for \$1800/month. Another issue related to on-campus housing included lack of kitchen access. Although residence halls were typically equipped with a small kitchen, students considered the kitchen inaccessible as it was shared with hundreds of other students and was poorly equipped for cooking.

Overall health and academic impacts

Many students spoke about the negative impacts of housing insecurity on their physical and mental health, social wellbeing, and academic performance. Additionally, these consequences were often interrelated and compounded each other. Many students discussed the issue of limited on-campus housing and the lack of affordable housing near campus, which students coped with by moving further from campus to find more affordable housing. However, the trade-off included long commutes that cost time, money, exhaustion, and stress. Students described feeling too tired to complete assignments after a long commute and being on campus or at work all day. The burden of commuting to school also limited time to focus on studying. Living far from campus was also described as socially isolating. Students discussed commuting to campus only on days that they had class due to

“My first year here I commuted from Los Angeles because I was intimidated by the higher rent and I didn’t want to pay \$800–\$1K a month just to share a bedroom. My grades started slipping ... I would get here after traffic about 10:00 or 11:00 in the morning and I would leave here at 10:00 or 11:00 o’clock at night and get home to L.A. and I’d be exhausted.”

UCI UNDERGRADUATE

“We have a rat infestation and there are 24 people packed into a house; it’s really gross. It’s a house that has 10 bedrooms and there are only 4 bathrooms. It’s pretty disgusting.”

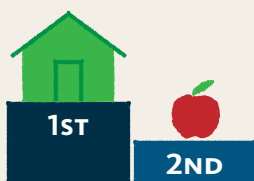
UCSC UNDERGRADUATE

transportation costs, which resulted in little opportunity to join clubs and feel connected to student life.

Many students spoke about the limited on-campus housing and the lack of affordable housing near campus. Students dealing with unsafe neighborhood conditions in exchange for affordable off-campus housing. This situation appeared to be riskier when relying on public transportation to get to and from campus.

For many students, working in addition to studying full-time was necessary to afford housing. However, this double workload also contributed to stress. The need to work in addition to studying full-time, for example, interfered with academic performance by further compounding their stress that made it harder to concentrate on academics.

Theme 3: Housing is a priority over food that leads to food insecurity



Given expensive rent, students had little money left over for food. For some students, food insecurity was an issue after paying rent on the first of the month, and for others food insecurity occurred at the end of the quarter or semester term.

Students strategize to cope with food insecurity

Some students shared that friends supported each other by grocery shopping together and splitting the costs. Friends and housemates also supported each other by going to the campus food pantry and selecting

different food items so that they would end up with a variety of foods. This was especially helpful when the campus food pantry allowed students a set number of weekly ‘points’ to spend on a first-come, first-serve basis, for example, dairy items (e.g., 2 points) being worth more points than vegetables (e.g., 1 point).

Students affirmed that free food offered at events was another way of meeting their dietary needs. Free food was so essential that some students had it scheduled into their calendars, knowing which days certain clubs, meetings or nearby markets gave away food. However, students acknowledged that free food was not always the healthiest. Other students coped over the short-term with food insecurity by skipping meals to make food last longer or rationing food, such as stretching a single meal into two or three meals. These students acknowledged that rationing or skipping meals one week did not mean that they were going to have more food the next week, which indicated a constant struggle.

Students also talked about choosing the most affordable campus meal plan (equivalent to about 11 meals per week) and then binge on food from the dining commons. Under such circumstances, students would either eat a lot at one sitting or when possible stretch their meal swipes (ID/meal card) into several meals by taking leftovers. This was also the case when students were given swipes through the Swipe Out Hunger program in which students can give an unused swipe to a student in need.

Consequences of food insecurity

Students discussed multiple impacts of food insecurity. For example, they discussed the psychosocial impact of hunger, including the loneliness that students experienced from not having the shared experience of eating at the dining hall or eating out with friends. Loneliness and isolation were consequences of not

“If you don’t eat this week, it doesn’t mean you can eat more next week. A lot of times people end up eating a lot for one meal and then skip dinner for the day. We stretch out our meal plans for the week, since we don’t get enough for two meals a day.”

“There’s no way to be in full extracurriculars when you have to work because you have financial situations where you’re not eating, and that’s when your mental and physical health could be affected, because you’re not eating and are oversteering. So how could you be successful with your academics, with extracurricular, and doing this and that when you don’t have these basic needs presented to you?”

UCB UNDERGRADUATE

having enough food to eat or having to make meals at home, and therefore missing opportunities to socialize. The missed opportunities experienced by students also included joining student organizations because meetings often involved eating at a restaurant or attending events that students did not have the means to afford. They described feelings of embarrassment when they had to decline student club events due to the cost.

Students generally felt that their food quality and dietary variety were poor given reliance on free food or food pantry items that did not always offer much variety. Students described the food sold on or near campus as either unhealthy but more affordable, or healthy but less affordable. For example, one student spoke about a \$3.79 sliced orange for sale at the student market.

Students also described coping with a constant tradeoff between eating and other priorities like seeking medical services (to avoid medical bills) and physical health. Some students also noted the physical signs of hunger, including sickness, fatigue and sleepiness. They explained that it was hard to focus on studying when hungry and one’s mind was on food.

Theme 4:
Transportation
barriers interfere
with meeting
students’ basic needs



Students living off-campus and further away from campus to avoid high rent reported relying on public or personal transportation. Students on all campuses expressed the need for more affordable and more consistent transportation. Transportation options to campus were described as limited, expensive and/or unreliable. For example, some bus routes operated on an hourly basis and did not have enough capacity. Students spoke of stressful competition to board overcrowded buses in order to get to class on time. One student gave an example of missing class due to the local bus being full. In addition, many transit options did not follow a reliable schedule, forcing students to leave early to allow enough time to find alternate transit if the bus failed to arrive. Students spoke about having to wait anywhere from 30-50

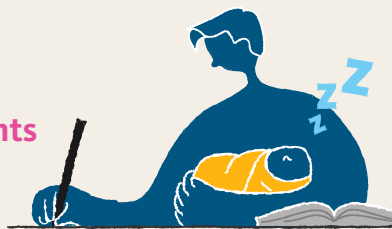
“Foods here are ridiculously expensive. Health Promotion is doing a great job of promoting resources, but at the same time they sell really expensive fruits and vegetables. Our campus is far away from the city and a lot of us don’t have cars, so I rely on the bus. It’s harder for most students to go out of their way to buy fruits and vegetables, but it’s a lot cheaper than buying them on campus.”

UCM UNDERGRADUATE

minutes for the next bus. Medical students spoke about limited transportation options when they ended their hospital shifts at odd hours (e.g., 2:00 AM). At such times, their only options were services like Lyft or Uber, which quickly added up to a lot of money.

Students also described limited transportation options contributed to their food insecurity. Students spoke of the need for affordable grocery stores close to campus instead of the more expensive food on campus. This was especially true for students with long commutes who discussed staying on campus all day with only expensive and often unhealthy foods available nearby. For students living on campus, they described long travel times to affordable grocery stores when relying on public transportation because of either long distances or unreliable bus schedules. One student described travelling forty minutes each way to purchase groceries at a lower price. Lack of access to more affordable food was also a time challenge, especially for full-time students who were also working to meet their basic needs.

Theme 5: Nontraditional students and graduate students face unique challenges



Nontraditional students (i.e., first-generation students, student parents, older students, and out-of-state or international students far from family) reported facing additional challenges to meet their basic needs.

First-generation students

Some first-generation students (being the first in their family to attend college) discussed the obligation of financially supporting their family back home. First-generation students reported receiving little guidance on how to budget their financial aid or navigate the university system. Families of some first-generation students did not understand the high cost of student living (including tuition, books, food and rent) nor the time demands of academic study. Furthermore, first-

generation students especially struggled between feeling grateful for being accepted into a UC and for receiving financial aid and guilt or shame for needing to ask for even more support.

Student parents and older students

Student parents described the hardship of working to support their family while being a student. One student parent spoke about working full-time to support herself and her two children. Students with children also discussed the difficulty of finding housing to accommodate their family. In general, on some campuses, older students struggled to fit into a housing system that seemed designed for a younger population. Furthermore, older students spoke of the challenge of being ineligible for on-campus dorm housing and other housing on campus due to their age (over 25 years old). Older students reported living far from campus since they were unable to get on-campus residence hall housing.

International and out-of-state students

International students and those from out-of-state faced additional challenges. Owners of off-campus housing have required students to provide a social security number and/or a credit history to apply for housing, neither of which international students have. Not having families nearby often meant a weaker safety net for meeting basic needs. One student from out of state expressed that there's "no one watching over my shoulder to make sure I'm eating today." Students who lived near their family discussed feeling fortunate to be able to eat meals at home on the weekend while their peers without proximal family struggled more with food security.

"As an international student it's difficult to get housing because they expect you have an SSN, a cell phone number and everything, and we do not."

UCI UNDERGRADUATE

Nontraditional students and graduate students face unique challenges

First-generation students

First-generation students lack parental guidance on how to navigate the university system and financial aid.



Students parents and older students

Student parents are responsible for their child's needs in addition to their own academics and finances.



International and out-of-state students

International students and out-of-state students cannot rely on proximal family members for social support or shared meals.



Graduate students

Graduate students struggle with fellowships and salaries that do not cover the cost of attendance and have work restrictions that limit their total income.



Graduate students

Graduate students also face unique issues in meeting their basic needs. As mentioned, housing leases often do not align with graduate student stipend schedules. This issue related to rent being due on the first of the month at the beginning of the fall term, but student stipends not being issued until after the first month of the fall term. Furthermore, graduate students in the humanities did not receive stipends over the summer months, which created a gap in funding that made it hard to pay rent and not lose their housing contract.

The most common issue, however, was that graduate student fellowships and other forms of funding, such as a graduate student instructor or researcher jobs, did not cover basic needs. Students explained that they did not receive funding in the summer, which challenges their ability to pay for housing and food in between terms. Some also spoke of their funding placing problematic restrictions on their work hours. These included UC supervisor-imposed work restrictions, fellowships, and summer work restrictions that further compounded their difficulty meeting basic needs.

Theme 6:
Limited financial aid
is a barrier to meeting
students' basic needs



Financial aid is not sufficient to meet students' basic needs

Many students, both undergraduate and graduate students, stated that their financial aid package was not sufficient to cover expenses. For example, for some students the cost-of-living estimate provided by the University as an upper limit for financial aid was lower than their actual costs for the year. This resulted in a double workload (working and being a full-time student). Some students described having several jobs to supplement financial aid or working extra hours particularly when financial aid ran out toward the end of the term, which coincided with exams. Throughout the focus group discussions, students expressed the need for additional funding to cover the true cost of college attendance. They discussed having to

"All my financial aid goes to rent, and it doesn't cover a whole month of it. I don't touch it for anything else."

UCSC UNDERGRADUATE

constantly budget and prioritize food over other needs, and most often the easiest way to reduce living costs was by skimping on food. Students expressed needing better skills for living on a very tight budget—especially true for most students who were functioning on their own away from family for the first time in their life.

Students from low-income families added that they could not turn to their families for financial help. Instead, students reported feeling pressure to send money home to help their families meet their basic needs. Unable to qualify for grants and financial aid provided for lower income students, middle class students also discussed struggling with college affordability. Students mentioned that middle class students, for example, were unable to get work-study jobs to help offset the high cost of living.

Navigating financial aid is challenging

When students reached out for financial aid assistance, some students felt that university staff were insensitive to their financial struggles. For instance, a student described hostile interactions with administrators when seeking assistance. Some students described the staff and faculty as being out of touch with the experience of low-income students. One spoke of a staff person telling them to buy a car, which was expensive and unobtainable, as a solution to their long commute to school. Another student discussed giving up on communicating with the financial aid office after a staff member told the student to call her family for financial help, not understanding that this was not an option.

One source of tension between students and financial aid administrators came from students being asked why they were not taking out loans or maximizing their existing loans. For some students, taking out loans was not something that they considered financially

responsible. For students with loans, they felt like they had no choice, despite constant worry about the amount of debt they would acquire and questioning whether they would be able to pay back the debt after graduation. A couple of students used credit cards to avoid loan debt or to supplement their financial aid loans. In general, students had limited education on and understanding of how to navigate and maximize campus financial resources, including but not limited to financial aid and loans.

Navigating the financial aid policies can be challenging. For example, work restrictions from fellowships left graduate students unable to meet their basic needs. A disabled student spoke of choosing between keeping their disability allowance and accepting scholarships, an example of a lack of coordination between offices. Some students who needed to budget for the upcoming year experienced stress due to the late announcement of financial aid packages. Furthermore, students felt frustrated that additional loans are often the only form of financial aid provided to them, a form of aid that requires costly payments after graduation. With uncertain job prospects after graduation, worrying about loan repayment was an additional form of stress that students experienced.

“This is my first year. I hadn’t learned all these adult things and there wasn’t even, maybe I just didn’t find the right resources online, but I felt like there’s no guidance to do so. In probably the 12 attempts to reach out, I started a case with the Financial aid office, but none of them were really successful. So, it felt like going in circles and in the end, I just had to like figure stuff out myself.”

UCB UNDERGRADUATE

Theme 7: Fees further add to basic needs insecurity



Many students discussed an assortment of often-unanticipated fees, which challenged their financial security. These fees included convenience fees for credit card payments, housing waitlist fees, late rent fees, and parking and shuttle fees. Students who pay for tuition and campus housing on credit cards must pay additional fees to use the card, which places more burden on already precarious finances. In addition, some students struggled with fees to get onto a housing waitlist. To get housing can require being on several housing waitlists which makes the waitlist fee untenable for financially insecure students. Students also spoke of their difficulty paying for on-campus shuttles to get to university housing. Students with cars also faced the challenge of unaffordable parking fees. Students who already have medical insurance explained that they struggled to find the information to waive their UC health insurance, an additional fee that is beyond the capacity of many students. Burdened with the high cost of living and tuition, the many types of fees imposed on students further limits students’ ability to meet their basic needs.

“[The University should be] more transparent about fees and costs in my program. It’s like this cultural problem — the assumption that everyone has \$600 sitting around...”

UCSF GRADUATE STUDENT

Theme 8:
University basic needs services are essential and should be expanded and strengthened to make services more easily accessible.



Many students agreed that campus basic needs programs were essential, specifically the campus food pantry and other free food programs. Students discussed the food pantry as being in high demand, and food always going fast on restock days. In addition, because food pantries mostly function on a first-come, first-serve basis, there was little variety at the end of the day or mid-week. Students also noted that the location and hours were not always convenient. Some food pantry hours overlapped with class times or the location was inconveniently located on campus. Students suggested keeping the pantry open longer hours or on a daily basis to increase accessibility.

Other areas for improvement involved dissemination of basic needs information. Students discussed that basic needs information was sometimes unclear or not well communicated, which created barriers to accessing services. Navigating the bureaucracy of the various departments, such as housing, disability services, and financial aid, could be extremely difficult due to a lack of communication between departments, difficulty getting a timely appointment and/or communication challenges. Students also spoke about university staff, faculty and administrators underestimating their struggles.

When participants were asked what advice they could send their high school self, many students said they would tell themselves to get a job and save money, and start searching for affordable housing. In general, students expressed the need for more preparation—even when in high school—on the true costs of attending college and how best to navigate those costs.

“I’ll just say I was just lucky to find out about the resources on campus early on. But I feel like it’s operated under the shadows. They don’t have an ad saying “we are available to help you.” You kind of have to find these resources yourself. I feel like there are some resources that I may qualify for, but I don’t know where they are or how to access them.”

UCSF UNDERGRADUATE

“I can’t rely on my parents. They don’t pay for pretty much anything. Last quarter, I had two jobs while I studying full time and I quit one of them this quarter because I can’t do that anymore. We do have a lot of resources on campus, like the Cowell Coffee Shop [UCSC free food resource], it’s one of the main reasons I’ve been able to eat lunch at school. Just 2 weeks ago, I had like \$20 in my bank account and it’s like: Okay, I can either spend \$10 on lunch and not have any money until my next paycheck, or I could go to the Cowell Coffee Shop and then, we’ll probably have free lunch.”

UCSC UNDERGRADUATE

PHASE 2

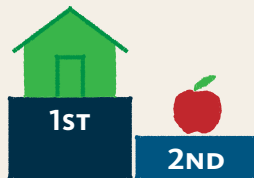
Eight themes from students discussing their experiences related to basic needs and housing and food insecurity.



Student definition of basic needs is more than minimal food and shelter



Students encounter multifaceted issues regarding housing insecurity



Housing is a priority over food that leads to food insecurity



Transportation barriers interfere with meeting students' basic needs



Nontraditional students and graduate students face unique challenges



Limited financial aid is a barrier to meeting students' basic needs



Fees further add to basic needs insecurity



University basic needs services are essential and should be expanded and strengthened to make services more easily accessible.

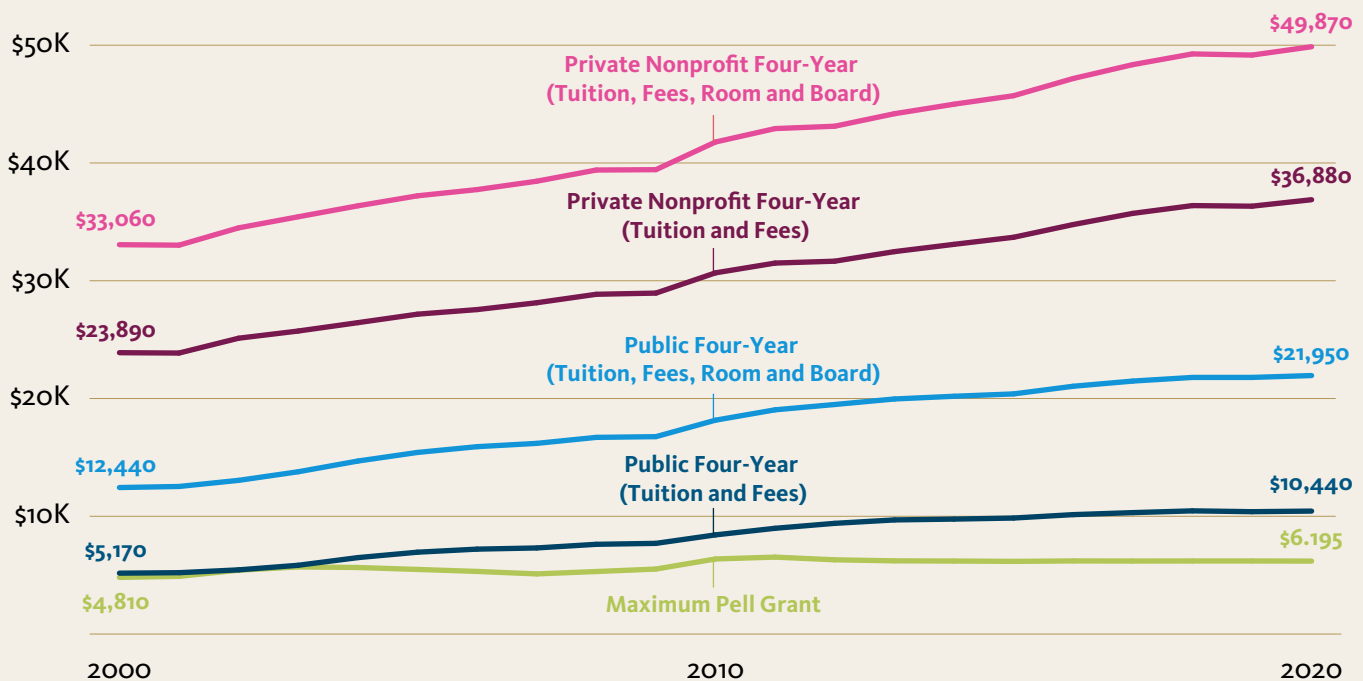
Discussion

Student basic needs is receiving increasing attention as affordability of post-secondary education declines. The cost of attending a 4-year college or university is at an all-time high, and financial aid has not kept pace.³⁸ Currently, the purchasing power of the average Pell Grant is at an all-time low.³⁹ As a result, student debt nationally has increased two-fold in the past 10 years.⁴⁰ In addition, some campuses, which is true for many campuses in the UC system, are located in areas where land is limited and housing is expensive.⁴¹ These trends disproportionately affect low- and middle-income students given slow wage growth over the last forty years that has contributed to a rise in income inequality in the U.S. Low- and middle-income students may receive little to no financial support from family. In addition, a large proportion of today's college students are the first in their families to attend college and may not be well equipped to navigate university systems. Forty percent of UC students accepted to one of the 10 campuses are from low-income households and 37% are the first generation in their family to attend college.^{42,43}

In this study, some students had limited knowledge and understanding on how to navigate and maximize campus financial aid resources. Moreover, financial aid is failing to assist students in meeting their basic needs. Given the UC mission to increase student diversity, it is necessary to educate students on the real cost of attendance and provide strategies that will better prepare them to navigate the challenging cost of higher education.

Of note, most undergraduate students in this sample were 23.6 years old or younger, which may present an important point. Students who are under 24 years of age and dependents may qualify for a dependency override for the purpose of their financial aid award if they can prove that they are homeless. Such cases where a student would qualify for a dependency override include parental abuse (physical and/or emotional), neglect, incarceration or absence. A dependency override can increase their access to funds through financial aid.

FIG 9. INFLATION-ADJUSTED MAXIMUM PELL GRANT AND PUBLISHED PRICES AT PUBLIC AND PRIVATE NONPROFIT FOUR-YEAR INSTITUTIONS IN 2019 DOLLARS, 1999-00 TO 2019-20*



* Source: <https://research.collegeboard.org/...>



UCR R'Garden Harvest for the Student R'Pantry. Photo Credit: Richard Zapien

Assessing housing insecurity

A first step in solving a problem is to define it, and then assess its scale and extent. Identifying the extent of housing insecurity and extreme cases of homelessness in college students has been hampered by the lack of a clear definition, and therefore a valid measure of it. Despite this limitation, CSU researchers adapted the U.S. Department of Housing and Urban Development assessment for chronic homelessness by using the McKinney Vento definition of homelessness for children. The Hope Center researchers assessed student housing circumstances using items from the U.S. Census Survey of Income Program Participation. Although these items have been validated in their respective target populations, they have never before been pilot tested in a diverse student population from different campuses using a cognitive interview process.

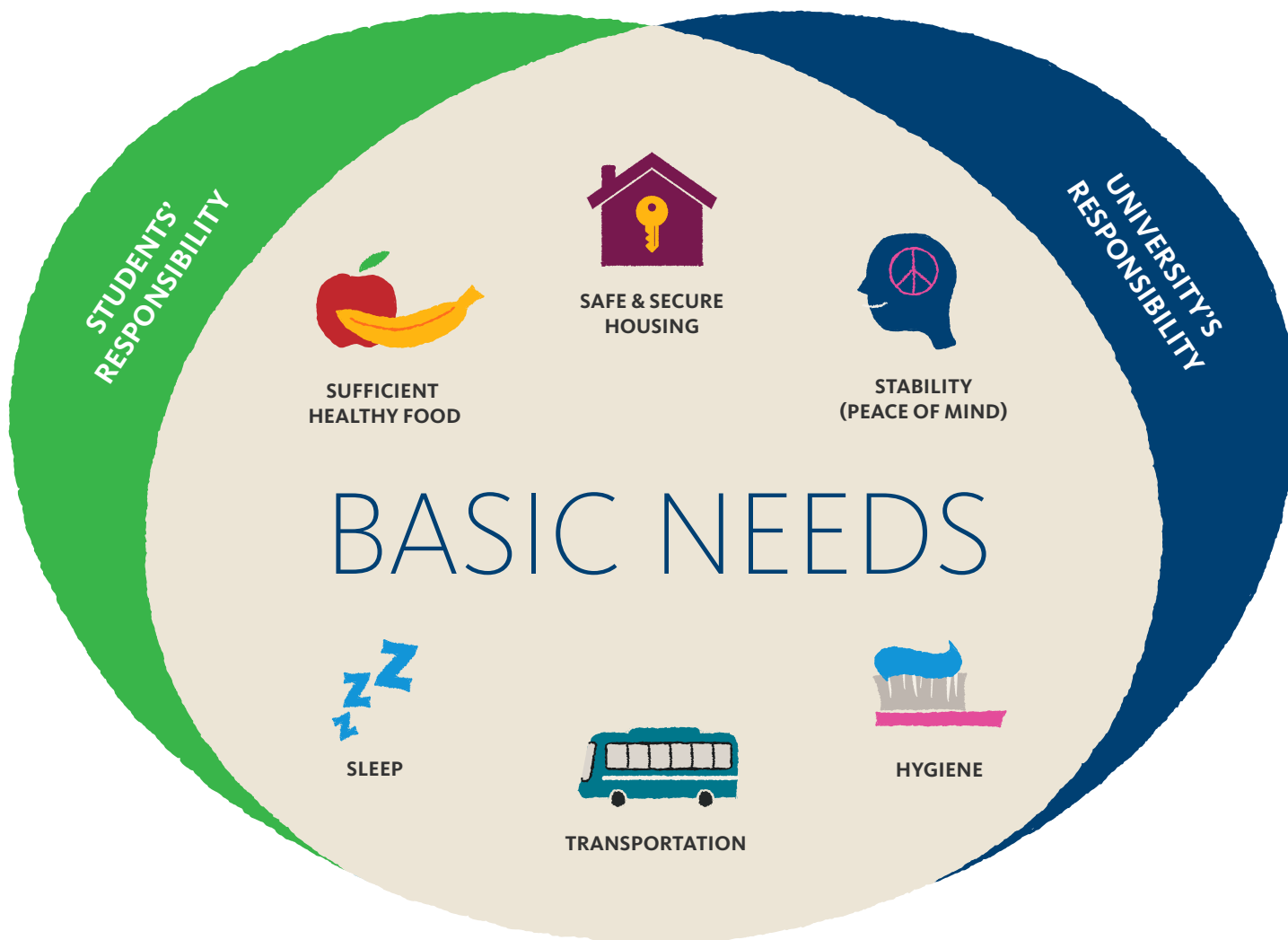
In this study, we collected student feedback on questions from prior surveys. Based on this input, the existing questions were refined and new ones developed and reviewed by students (see Appendix A for the original questions and Appendix B for the revised questions). The final survey contains the following four modules that assess a variety of living circumstances:

- 1) Students' current and past living situations (*17 items*)
- 2) Housing insecurity and challenges students encountered around housing (*21 items*)
- 3) Overcrowding issues (*6 items*)
- 4) Food insecurity timing and issues regarding basic needs security (*21 items*)

Because researchers or university program evaluators are typically limited in the number of questions that can be included in institutional surveys, it is unlikely to use all of these questions in one survey. Diving them into modules, however, allows for selection of those more relevant to the purpose of the research or evaluation. Future research is needed to identify a 'core' set of questions that might be used to grade the extent of housing insecurity. This is similar to how the USDA food security modules (which similarly vary in length depending on intended purpose and use of the resulting data) can be used to classify household or individuals into gradients of food security: high, moderate, low, very low.⁴⁴ Having a standardized method of quantifying student housing insecurity (or housing insecurity in any population) would enable identification of high risk students as well as tracking and surveillance of success in addressing housing issues.

FIG 10. DEFINITION OF COLLEGE STUDENTS' BASIC NEEDS

Based on student focus group discussions.



Redefining basic needs in higher education

A more comprehensive definition of student basic needs was developed based on student focus group discussions. Previous definitions focused only on housing and food security.⁴⁵ We found that students define basic needs in a more comprehensive way. While safe and secure housing and sufficient and healthful food were the most important basic needs for students, stability (peace of mind), sleep, transportation, and hygiene were also identified. Based on students' voices, we provide a student definition of basic needs that can serve as a conceptual framework for how institutions of higher education can define and address student basic needs.

Figure 10 illustrates the concepts that emerged when university students who struggled with affording a public college education were asked to define student basic needs. A notable addition is that of stability to housing and food, which students defined as having peace of mind that comes with not having to worry about affording housing and getting enough food. Safe and secure housing as well as enough space for sleeping and studying were important as they are likely compromised when students live in overcrowded or unsafe conditions with constant stress regarding paying rent. Affordable and reliable transportation were identified as basic needs, especially for those

FIG 11. DEFINITION OF COLLEGE STUDENT HOUSING SECURITY

Based on student focus group discussions.



who live further from campus in areas where they pay less expensive rent. Access to kitchen facilities for meal preparation and storage were important. Access to other facilities, such as a place to shower and to do laundry were basic needs that come with having a secure place to live. Lastly, students identified the university as being responsible in helping them meet their basic needs (e.g., financial aid and student support services) in addition to their own responsibility.

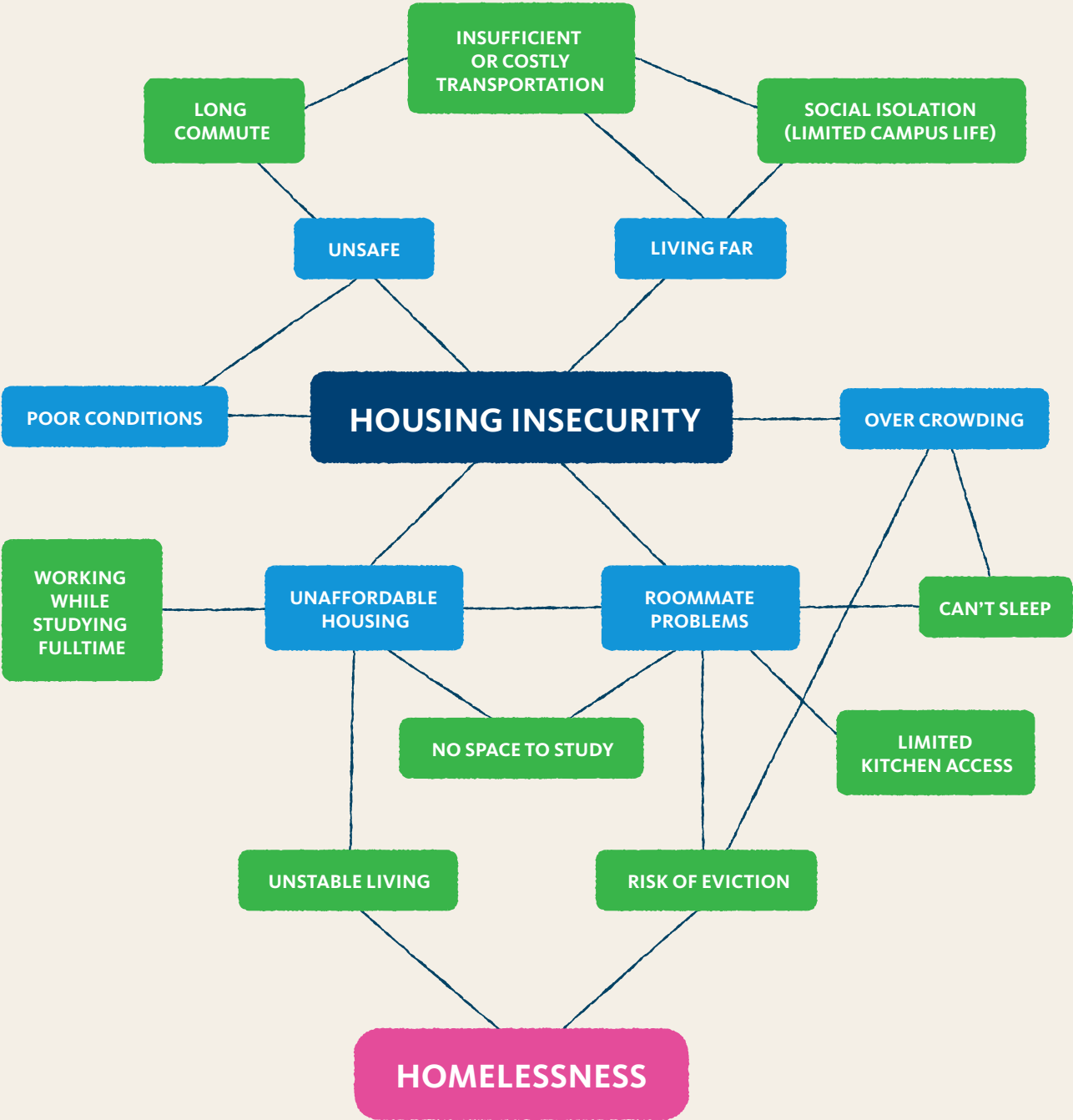
Redefining housing security in higher education

Emerging research on housing insecurity among college students suggests that students today face increasing

challenges with housing. Nevertheless, academic institutions are just beginning to document the extent of housing insecurity and homelessness, and these terms have not been defined in higher education in a standardized way. According to students, housing security means having safe and stable housing, with a place to shower, sleep, and personal space to study all while free of housing-related stress (See Figure 11 above). In addition, kitchen access is also important, because in cases of overcrowding or a roommate in the living room, the kitchen was either off-limits or unsanitary. Because less is known about student housing insecurity than food insecurity, considerable

FIG 12. THE HOUSING INSECURITY WEB

Shows the relationship between concepts discussed by students describing their housing situation and how it contributes to mental stress. (Note: Issues related to housing insecurity are presented in light blue. Situations stemming from housing issues are presented in green. Homelessness is presented in pink and is the most severe case of housing insecurity.)





Experiencias para Echar Andar Otro Mundo” “Experiences Towards Another World” --at the UCSC CASFS HayBarn Credit: Tim Galarneau

time was devoted to the topic of housing during focus groups discussions. Figure 12 (page 40) shows the web of relationships in terms of how concepts connected when students described their housing situation, all of which contribute to mental stress. For instance, housing insecurity is a consequence of unaffordable housing, which leads to overcrowding, and in turn contributes to challenges with studying and sleeping, and further compounds mental stress. In addition, the high cost of housing leads to students working too many hours, which also contributes to stress. Sometimes not being able to cover housing costs results in an unstable living situation, and in extreme cases homelessness (defined in several ways such as couch surfing or sleeping in a campus lab or a car), stressful situations in and of themselves. Another consequence of coping with high housing costs was living far from campus, which contributed to long commute times, and high transportation costs, and all of which contribute to social isolation, and further contribute to student stress levels. Isolation also results from not having money to attend campus events, coming to campus only on days when classes are in session due to commute costs, or eating at home instead of with friends in order to save money and spread limited meal resources. The mental stress that looms in the background of this

housing insecurity web ultimately affects students’ ability to perform academically, which in turn, further compounds stress levels.

Food insecurity in the context of housing insecurity

To date published studies of student basic needs focus primarily on food insecurity and reports mainly speak to the prevalence of food or housing insecurity, but not to the interconnectedness of the two. Our research adds to the understanding of student food insecurity by highlighting its connection to housing insecurity. It was in this context of housing insecurity that students discussed food insecurity (Figure 13, page 42). Covering rent for housing is the main priority for students with housing because if they cannot pay their rent, they face eviction and potential homelessness. Yet, this logical prioritization means that housing takes precedence over food resulting in students skipping meals or eating less healthy free food. The food pantry and free food at campus events become important sources for food, as food for purchase on campus is expensive. Students living on or near campus without transportation have limited access to affordable food outlets. It is important to note that this might be different for students who have dire homelessness who may prioritize food over housing, as securing housing may seem inaccessible.

FIG 13. **FOOD INSECURITY**

Discussed by students in the context of housing insecurity.



Student-informed recommendations for addressing basic needs in higher education

College students are a vulnerable population and underrepresented in basic needs research likely based on the assumption that they are a privileged population. The inherent structural challenges that many of today's college students face in affording the cost of attending college, stable housing and adequate food challenge their ability to be solely responsible for their own housing and food security. Food pantries, the federal Supplemental Nutrition Assistance Program (SNAP, known as CalFresh in California), and free food help students meet their basic needs. Additional university support, however, is essential for students to avoid housing and food insecurity and be successful academically. Students provided several suggestions for helping them meet their basic needs such as expanding food pantry hours, locations and food variety. Other areas for improvement involved dissemination of basic needs information and coordination between campus offices that provide related services (e.g., housing, fellowships, financial aid). Based on student discussions, the following are recommendations that can be used to improve students' basic needs:

- Regular assessments of student food and housing insecurity are needed to document the extent of the problem and to generate support for remediation and prevention. In addition, this means reconsideration of wording used in the HUD measure of homelessness as students may not consider themselves as “homeless”. Using the McKinney Vento Act definition and wording may be a more valid and reliable as well as culturally sensitive.
- Increase affordable campus housing opportunities that are not owned by outside entities who charge high rents and late fees.
- Implement standards for the number of students in dorm rooms. Others have shown that 50 square feet per person in the household is the minimum for healthy child growth and development, whereas others suggest at least 165 square feet per person for U.S. household.^{46,47,48}
- Work with city transportation or campus transportation to subsidize transportation for students and to increase the number of buses/shuttles operating routes to/from campus.
- Host trainings or workshops with financial aid administrators to better support students with financial planning to consider all costs—not just tuition, but housing, food, and transportation.
- For all faculty, researchers, administrators and staff, increase sensitivity training and awareness regarding the diversity of students and their backgrounds (traditional and nontraditional) as a means to increase sensitivity and responsiveness to their needs.
- Host workshops for students to improve financial aid loan literacy so that students maximize loans and not credit cards.
- Develop basic needs strategies to educate and better prepare students with the skills to navigate the reality of college affordability—prior to and early after college admission.
- Improve accessibility of existing basic needs resources, strengthen them, and expand their capacity to serve more students. Simple efforts could include extending food pantry hours to reduce conflicts with student schedules so that more students are able to have access. More costly solutions could involve replicating the National School Lunch and Breakfast Programs to provide access to free and reduced price meals on campuses.
- Future research could examine issues regarding student employment, such as how many hours students should work without jeopardizing academic performance.

Study strengths and limitations

This study had several limitations. First, participants were mostly female, which means that the discussions may have reflected female perspectives more than male perspectives. Also, the issue of conformity and/or stigma around housing and food insecurity may have limited some students from expressing their true experiences or opinions.

The strengths of this study include the number of campuses included in order to represent a diversity of UC students. We recruited students from food

pantries and basic needs centers on five UC campuses. This targeted recruitment was done for two purposes. Hosting these sessions at food pantries and basic needs hubs where students are used to coming was meant to create a safe space for students to express their experiences. In a recent survey of student food pantries, students were in agreement that having these spaces on campus increased their sense of belonging. Targeted sampling also ensured inclusion of students most at risk of housing and food insecurity to reflect upon the meaning of basic needs and increase the content validity of survey questions tested on housing insecurity.

Conclusion

College attendance, tuition and student housing costs are at an all-time high, and the proportion of these costs covered by the Federal Pell Grant is at an all-time low. Slow national wage growth, which has given rise to increased income inequality, may exacerbate the cost of attending college for students from low- and middle-income families. These costs present enormous but under-recognized dilemmas for students from low- and middle-income backgrounds—the risk of not meeting basic needs or facing enormous student debt after graduation. Students end up paying high rents to stay near campus or look for housing further away from campus.⁴⁹ For students living far from campus, commute times can be up to two hours each way. Evidence suggests long commutes are detrimental to students' academic performance.⁵⁰ For students living near campus, transportation may be limited, and therefore, affordable food options may be too.

College students, undergraduate through doctoral, face intersecting economic (e.g., personal and family/guardian finances) and social barriers to completing their degree(s). These barriers include going without food or essential medical services, working in addition to being a full-time student, and not participating in social or extracurricular activities.^{51,52} All of these barriers vary according to the socio-economic

circumstance of the student and the resources available at their institution to support them. Additionally, working while studying full time poses risk to students not completing their degrees. Low-income students are more likely to drop out, and among those who stay, food insecurity, long commutes, and unstable living conditions can undermine their academic performance and physical and mental health.^{51,53} Education is regarded as 'a great equalizer' in closing the inequality gap by providing the skills and tools to lead a productive and healthy life. Yet, despite efforts to reduce disparities in university admissions, unequal access to meeting basic needs while attending college make success not equally achievable. Much work remains in achieving equity regarding student basic needs. Future progress toward equity will require moving beyond minimal food and housing to more holistic definitions of student basic needs. Moreover, fundamental and comprehensive approaches are needed to ensure that all students can effectively navigate the UC system, and in turn, successfully complete their degree.

COVID-19 Statement

One year ago, we conducted a study to increase understanding of the barriers that students experience in meeting their basic needs, which we defined then as food and housing. Discussions with students revealed that basic needs included the following: *safe* and *secure* housing, *sufficient* and *healthful* food, peace of mind (i.e. mental health), sleep, transportation, and hygiene. In this report, we lift students' voices who are at the intersection of having one or more identities (e.g. being low-income, first-generation to attend college, caregivers) and struggling to meet their basic needs.

The current report is being released in a time of sudden rapid change as a consequence of COVID-19, which has further compounded many students' ability to meet their basic needs. Now more than ever, the inequalities in higher education are evident. By understanding the vantage point of students, we are also able to draw attention to the existing structural barriers resulting from defining student diversity simply by numbers rather than the equitable support systems needed to promote student success.

As we enter a new decade, marked by COVID-19, it is imperative that we redefine student basic needs to improve the student experience in higher education. In doing so, we will be able to address the structural inequalities that are systemic in higher education. By acknowledging and learning from the past, we will move toward a future that is demographically rich and inclusive of intersectional identities as well as structurally competent to provide all students with the necessary financial support and support services to succeed. This practice is vital for creating equitable learning environments for all students. In holding true to the University of California's (UC) mission, it is essential for the University to adapt to the needs of today's student. We look forward to the upcoming UC Board of Regents Special Committee's Report on Basic Needs, that will inform the next phase of our UC Basic Needs efforts.

Endnotes

- 1 Ma J, et al, 2017. Trends in college pricing 2017. New York: The College Board. Retrieved from: <https://trends.collegeboard.org/...>
- 2 Goldrick-Rab S, Kendall S. The Real Price of College. Wisconsin Hope Lab. Retrieved from <https://tcf.org/...>
- 3 Martinez SM, Maynard K, Ritchie LD. Global Food Initiative: Food and Housing Security at the University of California, July, 2016. Retrieved from <https://www.ucop.edu/...>
- 4 University of California. Global Food Initiative: Student Food Access and Security Study, December, 2017. Retrieved from <https://www.ucop.edu/...>
- 5 California State University, 2016, Serving Displaced Students and Food Insecure Students in the CSU, <https://presspage-production-content.s3.amazonaws.com/...>
- 6 Wisconsin Hope Lab, 2017. Hungry and Homeless in College: Results from a National Study of Basic Needs in Higher Education. Retrieved from <https://hope4college.com...>
- 7 California State Assembly Budget Committee, July 2019. Retrieved from: <https://abgt.assembly.ca.gov/...>
- 8 Goldrick-Rab S, et al, 2018. Still Hunger and Homeless in College. Retrieved from: <https://hope4college.com/...>
- 9 California State University, 2018; <https://www2.calstate.edu/...>
- 10 Nazmi A, et al, 2018. A systematic review of food insecurity among US students in higher education. Journal of Hunger and Environmental Nutrition. Retrieved from: <https://www.tandfonline.com/...>
- 11 USDA, 2019. Retrieved from: <https://www.ers.usda.gov/...>
- 12 California State University, 2018; <https://www2.calstate.edu/...>
- 13 University of California. Student Food Access and Security Study, December, 2017. Retrieved from <https://www.ucop.edu/...>
- 14 California Legislative Analyst's Office, 2015. Retrieved from: <https://lao.ca.gov/...>
- 15 Housing Affordability Index, 2019. Retrieved from: <https://www.car.org/...>
- 16 League of California Cities, 2018. Retrieved from: <https://www.cacities.org/...>
- 17 The U.S. Department of Housing and Urban Development, 2018. Retrieved from: <https://files.hudexchange.info/...>
- 18 National Center for Education Statistics; retrieved from: <https://nces.ed.gov/...>
- 19 Mitchell M, et al, 2018. Retrieved from: <https://vtechworks.lib.vt.edu/...>
- 20 California Budget and Policy Center, 2019. Retrieved from: <https://calbudgetcenter.org/...>
- 21 CollegeBoard, 2018. Retrieved from: <https://research.collegeboard.org/...>
- 22 U.S. Government Accountability Office, 2019. Retrieved from: <https://www.gao.gov/...>

- 23 University of California, 2018. Retrieved from: <https://www.universityofcalifornia.edu/...>
- 24 University of California, 2018. Retrieved from: <https://www.universityofcalifornia.edu/...>
- 25 Sarah Blanchard Kyte, Who Does Work Work For? Understanding Equity in Working Learner College and Career Success, (Iowa City, IA: ACT Center for Equity in Learning, July 2017).
- 26 Frederick, T. et al., 2014. How stable is stable? Defining and measuring housing stability. *Journal of Community Psychology*, 42(8), 964-979. Retrieved from: <https://onlinelibrary.wiley.com/...>
- 27 Goldrick-Rab S, et al, 2018. Retrieved from: <https://hope4college.com/...>
- 28 California State University, 2018; <https://www2.calstate.edu/...>
- 29 U.S.Federal Register, 2019. Retrieved from: <https://www.govinfo.gov/...>; U.S. Department of Education; retrieved from: <https://www2.ed.gov/...>
- 30 Cox R, et al, 2017. Retrieved from: <https://cesr.usc.edu/...>
- 31 Martinez et al, 2018. No food for thought: Food insecurity is related to poor mental health and lower academic performance among students in California's public university system. *Journal of Health Psychology*, Retrieved from: <https://journals.sagepub.com/...>
- 32 U.S. Federal Register, 2019; retrieved from: <https://www.govinfo.gov/...>; U.S. Census Bureau, SIPP; retrieved from: <https://www.census.gov/...>; DOE; retrieved from: <https://www2.ed.gov/...>
- 33 USDA, 2019. Retrieved from: <https://www.ers.usda.gov/...>
- 34 California Legislative Analyst's Office, 2015. Retrieved from: <https://lao.ca.gov/...>
- 35 Housing Affordability Index, 2019. Retrieved from: <https://www.car.org/...>
- 36 League of California Cities, 2018. Retrieved from: <https://www.cacities.org/...>
- 37 The U.S. Department of Housing and Urban Development, 2018. Retrieved from: <https://files.hudexchange.info/...>
- 38 National Center for Education Statistics; retrieved from: <https://nces.ed.gov/...>
- 39 Mitchell M, et al, 2018. Retrieved from: <https://vtechworks.lib.vt.edu/...>
- 40 California Budget and Policy Center, 2019. Retrieved from: <https://calbudgetcenter.org/...>
- 41 CollegeBoard, 2018. Retrieved from: <https://research.collegeboard.org/...>
- 42 U.S. Government Accountability Office, 2019. Retrieved from: <https://www.gao.gov/...>
- 43 University of California, 2018. Retrieved from: <https://www.universityofcalifornia.edu/...>
- 44 University of California, 2018. Retrieved from: <https://www.universityofcalifornia.edu/...>
- 45 Sarah Blanchard Kyte, Who Does Work Work For? Understanding Equity in Working Learner College and Career Success, (Iowa City, IA: ACT Center for Equity in Learning, July 2017).
- 46 Frederick, T. et al., 2014. How stable is stable? Defining and measuring housing stability. *Journal of Community Psychology*, 42(8), 964-979. Retrieved from: <https://onlinelibrary.wiley.com/...>
- 47 Goldrick-Rab S, et al, 2018. Retrieved from: <https://hope4college.com/...>
- 48 California State University, 2018; <https://www2.calstate.edu/...>
- 49 U.S.Federal Register, 2019. Retrieved from: <https://www.govinfo.gov/...>; U.S. Department of Education; retrieved from: <https://www2.ed.gov/...>
- 50 Cox R, et al, 2017. Retrieved from: <https://cesr.usc.edu/...>
- 51 Martinez et al, 2018. No food for thought: Food insecurity is related to poor mental health and lower academic performance among students in California's public university system. *Journal of Health Psychology*, Retrieved from: <https://journals.sagepub.com/...>
- 52 U.S. Federal Register, 2019; retrieved from: <https://www.govinfo.gov/...>; U.S. Census Bureau, SIPP; retrieved from: <https://www.census.gov/programs-surveys/sipp/about/sipp-content-information.html>; DOE; retrieved from: <https://www2.ed.gov/...>
- 53 USDA, 2019. Retrieved from: <https://www.ers.usda.gov/...>
- 34 Cutts DB, et al, 2011. U.S. Housing insecurity and the health of very young children. *American Journal of Public Health*, 101(8):1508–1514. doi:10.2105/AJPH.2011.300139.
- 35 Stahre M, et al, 2015. Housing Insecurity and the Association with Health Outcomes and Unhealthy Behaviors, Washington State, 2011. *Preventing Chronic Disease*, 12. doi:10.5888/pcd12.140511.
- 36 Gove WR, et al, 1979. Overcrowding in the home: an empirical investigation of its possible pathological consequences. *American Sociological Review*, 44(1):59-80.
- 37 Office of the Deputy Prime Minister, 2004. The impact of overcrowding: A review of evidence and literature. Retrieved from: <https://dera.ioe.ac.uk/...>
- 38 Mitchell M, et al, 2017. A Lost Decade in Higher Education Funding. Center on Budget Planning and Priorities. Retrieved from: <https://vtechworks.lib.vt.edu/...>
- 39 CollegeBoard, 2018. Retrieved from: <https://research.collegeboard.org/...>
- 40 CollegeBoard, 2018; <https://research.collegeboard.org/...>
- 41 California Legislative Analyst's Office, 2015; <https://lao.ca.gov/...>
- 42 University of California, 2018; <https://www.universityofcalifornia.edu/...>
- 43 University of California, 2019; <https://accountability.universityofcalifornia.edu/...>
- 44 USDA, 2019; retrieved from: <https://www.ers.usda.gov/...>
- 45 California State University; retrieved from: <https://www2.calstate.edu/...>
- 46 Bradley RH & Caldwell BM, 1984. The HOME Inventory and family demographics. *Developmental Psychology*, 20(2), 315–320. Retrieved from: <https://psycnet.apa.org/...>
- 47 U.S. Department of Housing and Urban Development, 2007. Retrieved from: <https://www.huduser.gov/...>
- 48 U.S. Department of Housing and Urban Development. American Housing Survey, 2005. Retrieved from: <https://www.census.gov/...>
- 49 California Legislative Analyst's Office, 2015; <https://lao.ca.gov/...>
- 50 Kobus MB, et al. 2015. Student commute time, university presence and academic achievement. *Regional Science and Urban Economics*, 52, 129–140. <https://doi.org/...>
- 51 Broton K & Goldrick-Rab S. 2016. The Dark Side of College (Un) Affordability: Food and Housing Insecurity in Higher Education. *Change: The Magazine of Higher Learning*, 48(1), 16–25. <https://doi.org/...>
- 52 Meza A, et al. 2019. "It's a Feeling That One Is Not Worth Food": A Qualitative Study Exploring the Psychosocial Experience and Academic Consequences of Food Insecurity Among College Students. *Journal of the Academy of Nutrition and Dietetics*, 119(10), 1713-1721.e1. <https://doi.org/...>
- 53 Martinez, et al. 2018. No food for thought: Food insecurity is related to poor mental health and lower academic performance among students in California's public university system. *Journal of Health Psychology*, 1359105318783028. <https://doi.org/...>