Food and Housing Security Among NC State Students

"In order to truly help under-resourced students, the university must be willing to offer help instead of waiting to be asked. They need to work hard to identify the resources that these students need and then offer them unconditionally"
–former NC State student

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February 2018

EXECUTIVE SUMMARY

In recent decades, several factors have converged to result in a rise in the number of college students who struggle to meet their basic food and housing needs. There are more students from low-income families and more first-generation students enrolled than in past decades.[1] This is a welcome trend, particularly for institutions like NC State that are land-grant universities with an historical mission to ensure higher education is available to those who meet admissions standards, regardless of socio-economic status. As young adults from under-resourced families enter college, their financial challenges often continue, without the cushion of family support that other students can rely on.

> *"I got here and the struggle continues... I reduced my meal plan to 100 meals freshman year so I could have more money to support my needs. I couldn't ask my dad because he was struggling himself and unemployed"*   *–former NC State student*

Students from financially secure families can struggle with basic needs too. According to estimates of the Wisconsin HOPE Lab—a leading national organization whose mission is finding effective ways to make college affordable—the cost of living for college students has increased by over 80% in the past four decades.[2] Increases in financial aid have not kept pace with rising tuition and escalating costs of living. A stagnant minimum wage and reductions in availability of affordable housing in many communities have further contributed to the financial burden associated with higher education.[3] NC State is not immune to these trends. Despite the fact that NC State is considered one of the best values in higher education, many students struggle to pay for educational and living expenses even if they receive financial aid, work one or more jobs, live in campus housing, and have a university meal plan.[4] This is a serious concern because food and housing insecurity is associated with poor overall health, high emotional distress, missed and dropped classes, delayed graduation, and drop out.[5, 6, 7]

Food and Housing Security among NC State Students

The *Food and Housing Security among NC State Students* initiative was launched in the fall of 2017 by a group of faculty, students, and staff in offices across the university in partnership with local community experts to address the challenge of student food and housing insecurity on our campus. An initial goal was to gain understanding of the magnitude of food and housing insecurity among our students by administering a student survey. Results of the survey are provided in this report. In addition, a website go.ncsu.edu/pack-essentials and vision were established:

All NC State students will have access to sufficient, nutritious, culturally appropriate, and affordable food *and* safe, affordable housing accessible to the university.

Student Survey Data: Key Findings. In October 2017, 7,000 students selected by the NC State University Institutional Research and Planning office to be representative of the undergraduate and graduate student body received an email invitation to complete an online survey. 1,949 students (28%) participated.

Food security

- 14% of students reported Low or Very Low food security over the past 30 days.
- The prevalence of food insecurity was similar for undergraduate & graduate students.
- Food insecurity was somewhat higher for students of color.
- About one third of students classified as food insecure had a university meal plan; almost 40% of those students said their meal plan was not sufficient to meet basic food needs.

Housing security

- 9.6% of students experienced homelessness over the last 12 months. The prevalence of student homelessness over the past 30 days was 3.5%.
- Temporarily staying with others and sleeping in an outdoor location (e.g., street, sidewalk, park) were the most frequently reported forms of homelessness.
- Food and housing insecurity go hand in hand; 24% of students who had experienced a period of homelessness in the past year had been food insecure in the past 30 days.

How does NC State data compare to other trends? Given wide variability in survey methods, comparing findings is challenging. Overall, rates of food insecurity among NC State students are generally consistent with other data sources, although low compared to most other published survey findings. Our rates of homelessness are high.

- **Food insecurity in NC.** The average prevalence rate of Low or Very low food security for NC households in 2014-2016 was 15.1%.[8]
- **Homeless youth in NC high schools.** According to the 2015 Youth Risk Behavior Survey administered to high school students in NC, 4.5% of high school students met the federal education definition of homelessness in the past year.[9]
- **Food and housing insecurity in higher education.** Estimates of *food insecurity* (combined low and very low food security) in higher education vary widely, from a low of 14.05% over 12 months at a university in Alabama to a high of 59% in the prior year at an Oregon university. [10,11] There are far fewer studies of *homelessness* among college students. 5.4% of students at a university in Boston had experienced homelessness at some point while in college.[12] In a review of student survey studies conducted by the HOPE Lab, 2% of 4-year college students and 6% of 2-year college students had been homeless in the past year.[13]

NC State University can—and should—be a national leader in assessment and resolution of student food insecurity and homelessness among students. We hope this report will prompt significant and rapid movement toward fulfilling the Vision.

Promoting Food and Housing Security among NC State Students

Members of the Steering Committee for the initiative reviewed the research literature, communicated with national experts on student food and housing security among students in higher education, and obtained reports from other campuses about data and strategies implemented to increase student food and housing security. Based on these sources and collaboration with individuals across the NC State community, recommendations are provided. Food and housing insecurity is a multidimensional challenge and will therefore require a *comprehensive* and *coordinated* response. Our approach should build on existing campus and community strengths and resources to address the unique needs of the NC State community of students. Following are systems-level recommendations.

1. **Establish a permanent advisory council** of students, faculty, staff, administrators, and community partners to articulate and ensure execution of a strategic plan to meet the Vision.
2. **Coordinate services**
    a. **Designate a Single point of contact (SPOC).** To streamline and hasten the process of securing basic needs, knowledgeable designated staff must link students to a coordinated network of diverse services for food, housing, basic needs, and financial emergencies. The emergency needs of students should be met *immediately*.
    b. **Establish a basic needs hub.** To the degree possible, comprehensive resources and information should be available in a single physical and/or virtual location.
    c. **Ensure no "wrong door".** Students with unmet basic needs should be able to talk to any faculty or staff member to receive a referral to the SPOC. There should be a clear and simple referral process, with ongoing training about that process for all service staff, faculty, administrators and community partners who might refer students.
3. **Develop an intentional research agenda**. To fully meet the Vision, there should be an analysis of the economic cost of successful matriculation through NC State, including costs to participate in activities valued by employers (e.g., study abroad, internships). Cross-discipline research in all areas related to college student food and housing security should be encouraged to contribute to the scant literature in this area. Ongoing assessment of student food and housing security will be needed; data should be used to develop, implement, and evaluate pilot programs.
4. **Secure funding streams.** Diverse sources of funding will likely be necessary to fulfill the Vision and sustain efforts over time. There must be clear paths for individual and organizational donors to make contributions to help students meet basic needs and a streamlined, transparent, rapid process for dissemination of those funds to students.
5. **Raise awareness.** Ongoing outreach should be conducted to increase and sustain awareness of hunger and housing instability/homelessness among students and awareness of campus and community resources. A campus-wide campaign to de-stigmatize help-seeking and economic stress also should be launched and sustained.

Individual Program Considerations

Below are specific programs developed to increase food and housing security on university campuses. We believe some combination of these programs can be components of a comprehensive systems-level approach to reducing student food insecurity and homelessness among NC State students. This list is by no means exhaustive.

*Several of these programs are already established to some degree at NC State. For details see go.ncsu.edu/pack-essentials

To increase food security:

1. **Campus Food Pantries***. Food pantries on college campuses reduce transportation barriers and are growing in frequency at a steady pace. The College and University Food Bank Alliance is a professional organization of on-campus programs that work to reduce student hunger https://sites.temple.edu/cufba/about-us/ Since 2012, NC State has hosted a food pantry that includes non-perishable food, beverages, and personal hygiene items; it is open approx. 25 hours/week. https://orgs.ncsu.edu/feed-the-pack/
2. **Food Recovery Programs***. The Food Recovery Network https://www.foodrecoverynetwork.org/ and Campus Kitchens Project https://www.campuskitchens.org gather unused food from campus locations (e.g., dining halls, catering kitchens) and repurpose the food into ready-to-eat meals that are distributed in residence halls or food banks; students simply warm up the meal. There are several mobile apps that food donors can use to post the availability of excess food that can be picked up and distributed to students. NC State has a student chapter of the Food Recovery Network which coordinates with University Dining for food recovery; currently all recovered food is donated to off campus organizations.
3. **Community Gardens***. On-campus gardens can donate a portion of the yield to campus food banks, providing fresh food in locations that typically offer only canned goods. At NC State, resources include the Agroecology Education Farm https://agroecologyeducationfarm.wordpress.ncsu.edu/ the student-run SOUL garden https://www.soulgardenncstate.org/, and extensive agricultural activity in the College of Agriculture and Life Sciences.
4. **Meal Donations***. Programs such as Swipe Out Hunger http://www.swipehunger.org allow students to donate pre-paid meal dollars/points. Donated points can be converted to dining hall vouchers. Other options include food scholarships and students who work on campus can be compensated through meal plans. NC State students who are employed by Campus Enterprises receive a free meal for every shift worked.
5. **Campus Farmer's Markets***. On-campus farmer's markets can be a source of accessible, affordable fresh food. These markets could participate in the national "Double Bucks" program through which the markets match SNAP benefits dollar-for-dollar to extend recipients' capacity to buy fresh produce. NC State has a weekly student-run Campus Farmer's market https://campusfarmersmkt.com/

6. **Campus SNAP Retailers**. Although regulatory requirements for accepting SNAP dollars are complex, with creative planning, universities can accept SNAP dollars (i.e., food stamps) in campus stores. A few campuses have found ways to do this, including Oregon State University https://www.insidehighered.com/news/2016/01/29/oregon-state-among-few-institutions-accept-supplemental-nutrition-assistance-program

7. **Food shuttles.** Shuttle services can transport students from campus directly to local low-cost markets such as farmer's markets and food banks.

8. **Food "kits".** Hungry Student Kits are bags of ready-to-eat and microwavable food and snacks available free to students at various locations throughout campus.

9. **Flexible meal plan options**. Very low-cost meal plan options such as one meal per day, Monday-Friday, can allow more students to participate in meal plans.

To increase housing security:

1. **On-campus Emergency Housing***. Some campuses reserve residence hall rooms or campus apartments for students who need short-term emergency housing (e.g. Kennesaw State https://www.universitybusiness.com/article/emergency-apartment-homeless-students-kennesaw-state). Other universities offer vouchers to cover several nights in a motel room. NC State Housing currently reserves two residential spaces for students who need 2-3 nights of emergency housing.

2. **Break housing**. A common time during which students are at risk for homelessness is university breaks when campus housing is closed. For examples of solutions, see http://naehcy.org/sites/default/files/dl/breakhousingexamples.pdf Students in the federally-funded TRiO program are eligible for assistance with housing during university breaks https://www2.ed.gov/about/offices/list/ope/trio/index.html

3. **Emergency shelters**. There are two known universities to have an emergency shelter specifically for students, run by students (with community partnerships). See UCLA's program http://www.bruinshelter.org/

4. **Referrals to federal housing resources**. Some campuses assist students in securing HUD vouchers (Housing Choice Voucher Program) for student Veterans. Others, such as Johnson C. Smith University, access federal funding to support housing of students aging out of foster care https://www.jcsu.edu/about/foster-care-initiative/phasing-up-to-new-possibilities-program2/guardian-scholars-program

5. **Active and engaged Homeless Student Liaison**. Homeless Student Liaisons can actively assist students with determinations as unaccompanied homeless youth for purposes of the FAFSA (see FAFSA, below), serve as a liaison between housing insecure students and local rental companies, and refer students to the campus SPOC for additional resources (the Liaison could also serve as the campus SPOC). See the state-wide effort in CO http://www.americaspromise.org/news/whats-working-colorado-simple-approach-helps-homeless-students-succeed-college

6. **Establish a host family program.** Local families can host students during school breaks or for longer periods. For example, see https://us.depaulcharity.org/depaul-home/our-work/programs/dax-host-home-program-chicago

Assistance with access to financial resources. Optimally, all the programs listed below would be administered by the SPOC in a coordinated campus hub. For an example, see Student Care Services at University of Central Florida http://scs.sdes.ucf.edu/intervention

1. **SNAP***. Completing the SNAP eligibility application is complex and eligibility criteria exclude some students; however, these benefits can be incredibly important in reducing food insecurity and are severely underutilized by college students. A recent study indicated that 80% of college students in NC who are eligible for SNAP benefits do not receive those benefits.[14] At NC State, More In My Basket is a program that helps connect NC residents (including students) to SNAP through awareness and application assistance http://www.morefood.org/en/

2. **FAFSA**. The FAFSA is complex and intimidating for students whose parents and/or mentors are not able to help them answer questions about parent income and assets. The College Cost Reduction and Access Act ([CCRAA], 20 U.S.C. § 1001 et seq.) confers independent student status on unaccompanied homeless youth. This status allows these youths' federal financial aid packages to be calculated based on their own income/assets, and not those of their parents and eliminates the need for the signature of a parent or guardian on the FAFSA.

3. **Emergency Funds.** Funds to assist students with emergency needs can circumvent further crises and drop out. Several universities in the California State University system, for example, have engaged in fundraising to support basic needs resources and host financial literacy workshops for students; use of these funds is transparent and coordinated with faculty, staff, and students who serve on a crisis response team. UNC Chapel Hill offers an accessible Student Emergency Fund to assist students with unexpected emergency expenses and the student is not required to repay the funds https://odos.unc.edu/student-support/student-emergency-fund

4. **Special scholarships.** Kennesaw State University offers three scholarships for students experiencing homelessness; two are endowed scholarships. NC State could access federal REACH grant funding for students exiting the foster care system; research indicates those students are at high risk for homelessness.

5. **Short-term loans**. Some campuses offer short-term loans to assist with unanticipated expenses that might impact their food or housing security and jeopardize continued enrollment. Some are no-interest loans with varied due dates; others are charged against the student's financial aid, and some require loan counseling.

6. **Case management.** There are local, state, and federal resources for individuals facing hunger and homelessness. Accessing these services can be complicated and time-consuming. Case managers with expertise in the requirements and application processes for these programs can ensure students leverage all the resources available to them; SPOCs could fill this role. Some of the many programs that students could access include SSI, Medicaid, Child care assistance, WIC, Veterans benefits, and utility assistance (e.g., Low Income Home Energy Assistance Program).

Food and Housing Security: Student Survey

Research Method

The university Office of Institutional Research and Planning provided the email addresses of 7,000 randomly selected undergraduate and graduate students to represent the student population. Students who were only enrolled in online classes were not included, but there were no other exclusionary criteria. An email invitation to participate in the study was sent to the 7,000 selected students. If they were interested in participating, they clicked the link provided in the email, which sent them to a full explanation of the study and informed consent information. Students who agreed to participate could begin the survey.

At the end of the survey, students had the option to enter a drawing for one of three electronic gift cards by providing their email address. Students who responded within one week were entered in the drawing for $100; those who responded by the second week were entered in the drawing for $75; those who responded by the third week were entered for $50. The survey was open for 4 weeks. Weekly reminders were sent to those who had not yet completed the survey. Procedures were approved by the university IRB.

A total of 1949 students responded to the survey. This response rate of 28% is higher than the rate for similar studies at other campuses. For example, the response to a student survey at all 10 campuses of the University of California was 14% and the rate for a survey at an Oregon university was 7%.[15, 16] Morris and colleagues obtained a response rate of 3.87% for the online survey of students at four universities in Illinois.[17] Mirabitur and colleagues reported a response rate of 7% for an online survey of food security among students in a university in the Midwest.[18] Goldrick-Rab, Broton, and Eisenberg obtained a response rate of 9% for their survey of students at 10 community colleges in seven states but they obtained very high response rates (over 60%) in two surveys of community college and university students in Wisconsin. [19, 20]

In spite of our high response rate, we acknowledge that many participants did not complete every survey item. The number of students who replied to each question is noted in the Tables below. Participants were representative of the student population, with a slight over-representation of women (56% of our sample vs. 46% of the population of students). This is common for student surveys at NC State and the same pattern is evident in other campus surveys of food and housing security. [21, 22]

Measure

Our survey was based on procedures recommended by Crutchfield and Maguire and used by the California State University system, with adjustments for our local needs and our specific research questions.[23] Items on the survey related to students' demographic characteristics, economic situation (e.g., employment status, methods used to pay college expenses), experiences as a student (e.g., degree pursued, GPA), types of assistance received (e.g., SNAP benefits, food pantry), housing situation, and food security. Questions used to generate the primary variables are described in the respective results sections below.

Results

Tables provided in this report include data for the full sample of participants as well as data for students who reported an experience of homelessness in the past 12 months and data for students considered food insecure in the past 30 days.

Food Security

USDA food security labels

Food Security

High food security: No reported indications of food-access problems or limitations.

Marginal food security: One or two reported indications—typically anxiety over food sufficiency and/or shortage of food in the house. Little or no indication of changes in diets or food intake.

Food Insecurity

Low food security*:* Reports of reduced quality, variety, or desirability of diet. Little or no indication of reduced food intake.

Very low food security*:* Reports of multiple indications of disrupted eating patterns and reduced food intake.

We used the 10-item version of the USDA's Household/Individual Food Security Survey Module (FSSM) with a 30-day timeframe (see USDA website).

Students first were asked to indicate whether they shared most of their meals with people living in their household (e.g., family members, roommates) or managed their own food arrangements. They were then directed to questions for either the (a) Household module or the (b) Individual module.

- 33% completed the Household module
- 67% completed the Individual module

Two of the 10 questions asked students to report the number of days certain food situations had occurred in the past 30 days. Although we did not deviate from the standard questioning, the format of our survey might have been confusing because almost no participants who should have answered those two questions actually provided an answer. Therefore, we adjusted the coding for the 10-item survey *using a conservative approach to defining Very Low Food Security*, as described below.

Using the recommended coding, participants who provided affirmative responses to none (0) of the FSSM items were considered **Food Secure**, participants with scores of 1-2 were considered **Marginally Food Secure**, and those with scores of 3-5 were considered **Low Food Secure**. Participants with scores of 6-8 were considered **Very Low Food Secure** (in contrast to scores of 6-10 in the recommended coding). Consistent with several prior

studies, we generated a **"Food Insecure"** variable by combining students who were Low Food Secure or Very Low Food Secure.

Food Security over the Past 30 Days

14% of students experienced food insecurity over the last 30 days. These students reported disrupted eating patterns, reduced food intake, and/or reduced quality, variety, or desirability of the food they ate. An additional 21% of students were only marginally food secure.

Table 1. *Levels of Food Security*

Secure	65%
Marginal Security	21%
Low Security	7%
Very Low Security	7%

Note: n = 1562.

Experiences of Food Insecurity Based on the USDA Food Security Module Items

Students faced various challenges in terms of food security over the last 30 days. About one fifth of students who responded to the items listed below reported that they or others in their household sometimes or often experienced at least one form of food insecurity such as not having enough money to buy more food when needed or not eating balanced meal because they couldn't afford it.

Table 2. *Food Security Challenges Over the Last 30 Days*

	Often True	**Sometimes True**	**Never True**
We (I) worried that our (my) food would run out before we (I) got money to buy more.	3.3%	17.3%	79.4%
The food we (I) bought just didn't last, and we (I) didn't have money to get more.	2.1%	13.7%	84.1%
We (I) couldn't eat balanced meals because we (I) couldn't afford it.	7.4%	22.8%	69.8%

Note: n = 1735-1743.

"Often, 3-5 days a week, I won't eat dinner. Not by choice, but because I can't afford to. I try couponing when I can"
—current NC State student

As a result of not having enough money for food, students or others in their household cut portion sizes, skipped meals, ate less than they should or went hungry. A small but sizeable percentage of students or members of their household lost weight (4.3%) or did not eat for a whole day (2.5%).

At a student population of 34,000, this equates to 850 students not eating for a full day in the past 30 days.

Table 3. *Consequences of Food Insecurity*

In the last 30 days, did you or other adults in your household…	Yes	No
… ever cut the size of your meals or skip meals because there just wasn't enough money for food?	13.9%	86.1%
… ever eat less than you felt you should because there wasn't enough money for food?	15.4%	84.6%
… ever go hungry but didn't eat because there wasn't enough money for food?	9.9%	90.1%
… lose weight because there wasn't enough money for food?	4.3%	95.7%
… ever not eat for a whole day because there wasn't enough money for food?	2.5%	97.5%

Note: n = 1675-1740

> *I lost a lot of weight during my early years of college and I was malnourished. I lacked energy to study and I felt awful at school. The few times I went to the doctor they often cited that I had vitamin deficiencies and I should be eating better. But they didn't understand we couldn't afford the healthy food one should eat.*
> *—current NC State student*

Food Security Challenges over the Past 12 Months

As expected based on prior research, the rate of students who faced any of the food security challenges listed below over the last 12 months was higher in the subgroups of students who experienced homelessness or were classified as food insecure. About 30% of students who experienced food insecurity and 14% of students who were homeless at some point over the past year went hungry because they could not afford more food. Although about one third of students who were classified as food insecure had a meal plan, almost 40% of those students said the meal plan was not sufficient.

It is a very positive finding that almost 92% of students in the sample were aware of the food pantry at NC State. It was interesting that a lower percentage of students who were

food insecure were aware of the food pantry (81%). The percentage of students who used the food pantry was highest for students who had experienced homelessness.

"I don't have a meal plan because I can't afford one. …My parents are on assistance so my help is limited"   *-current NC State student*

Table 4. *Food Security Challenges Over the Last 12 Months*

	Full sample	Homeless past year	Food insecure
Seek and receive free food or meals	15.4%	29.4%	31.1%
Go hungry because could not afford more food	5.5%	14.1%	30.2%
Have a university meal plan	45.6%	41.7%	36.3%
Have a meal plan-it is not sufficient	16.0%	16.2%	39.0%
Aware that there is a campus food pantry	91.9%	87.5%	81.7%
Have used the campus food pantry (among those who were aware of the pantry)	6.5%	12.2%	9.0%

Note. Sample sizes differ by item. *N* for full sample: 600-1949. *N* for homeless past year sample: 56-163. *N* for food insecure sample: 67-212.

Homelessness and Housing Security

Homelessness was defined on the basis of nine questions about housing status that equate to homelessness based on the US Department of Education criteria articulated in the McKinney-Vento Homeless Assistance Act (PL 100-77) https://www2.ed.gov/policy/elsec/leg/esea02/pg116.html
The items were drawn verbatim from the homelessness module proposed by the California State University guide to researching basic needs in higher education. Experts from Schoolhouse Connection and the National Association for the Education of Homeless Children and Youth provided consultation on wording of those items.

If students indicated they had slept in one of those nine conditions in the past 30 days or in the past 12 months, they were classified as having experienced homelessness.

My parents died in March 2016. Our house was foreclosed. I moved all of my things into my NC State dorm in August 2016 - that was the only place I had. I want to stay in Raleigh this summer so that I could be able to work and do internships, but I don't have a place to stay. I'm trying to find some affordable/free housing for the summer and all while trying to figure out insurance, doctors, and academic affairs.   *–current NC State student*

Homelessness over the Past 12 Months

A total of 1703 students responded to the items below. Of those, 9.6% (*n*=163) experienced some form of homelessness over the past 12 months. Students were most likely to temporarily stay with a friend or relative (4.6%). As the second most common category, 2.6% (*n*=45) had slept in an outdoor location such as a bus stop, under a bridge or on the sidewalk. Campers, motels, other closed areas, and treatment centers were mentioned by a combined 5% of the sample.

At a student population of 34,000, this equates to 3,264 students experiencing a period of homelessness in the past year.

Table 5. *Places Where Students Slept Over the Past 12 Months*

Homelessness Items	
Experienced any of the following	*9.6%*
At a shelter[a]	0.5%
In a camper[a]	1.8%
In transitional housing or independent living program[a]	0.6%
At a group home such as halfway house or residential program for mental health or substance abuse[a]	0.3%
At a treatment center (such as detox, hospital, etc) [a]	0.9%
Outdoor location such as street, sidewalk, or alley, bus or train stop, campgrounds or woods, park, beach or riverbed, under bridge or overpass[a]	2.6%
In a closed area/space with a roof, but not meant for human habitation such as abandoned building, car or truck, van, RV or camper, encampment or tent or unconverted garage, attic or basement[a]	1.0%
Temporarily in a hotel or motel without a permanent home to return to (not on vacation or business travel)[b]	1.1%
Temporarily staying with a relative, friend, or couch surfing until you find other housing[b]	4.6%

Note. N = 1703.
[a]Components of HUD definition of homelessness
[b]US Department of Education includes all HUD components, with the addition of these two items.

Homelessness over the Past 30 Days

As would be expected, the rate of homelessness was lower over the past 30 days compared to rates for the past 12 months. Of the 3.5% of students who had experienced homelessness over the past 30 days, the most common experiences were staying with friends or relatives (1.2% of respondents) and sleeping in an outdoor location (1.3% of respondents).

Table 6. *Places Where Students Slept Over the Past 30 Days*

Homelessness Item	
Experienced any of the following	*3.5%*
At a shelter[a]	0.4%
In a camper[a]	0.5%
In transitional housing or independent living program[a]	0.4%
At a group home such as halfway house or residential program for mental health or substance abuse[a]	0.06%
At a treatment center (such as detox, hospital, etc) [a]	0.3%
Outdoor location such as street, sidewalk, or alley, bus or train stop, campgrounds or woods, park, beach or riverbed, under bridge or overpass[a]	1.3%
In a closed area/space with a roof, but not meant for human habitation such as abandoned building, car or truck, van, RV or camper, encampment or tent or unconverted garage, attic or basement[a]	0.4%
Temporarily in a hotel or motel without a permanent home[b]	0.4%
Temporarily staying with a relative, friend, or couch surfing until you find other housing[b]	1.2%

Note. N = 1560
[a]Components of HUD definition of homelessness
[b]US Department of Education includes all HUD components, with the addition of these two items.

Housing Insecurity over the Past 12 Months
Housing insecurity was evaluated using seven items that describe housing situations that are highly unstable or unsafe. The California State University instrument includes many additional items related to housing security, but we made the decision to delete some items to reduce potential fatigue. These estimates are considered a conservative estimate because students were asked to indicate which of the situations they had experienced – they were not asked to reply *whether* each situation was experienced (yes/no); for this reason we are not sure whether an item was blank because a student had not experienced a situation or because the student skipped this section of the survey.

Table 7. *Housing Insecurity Over the Past 12 months*

Housing Insecurity Item	
Not know where you are going to sleep at night, even for one night.	1.2%
Leave the place you were staying at, because you felt unsafe.	1.5%
Get thrown out of the place you were staying at by someone else in the household.	0.5%
Not pay or underpay your rent.	1.5%
Get evicted from your home.	0.3%
Receive a summons to appear in housing court.	0.2%
Not pay the full amount of a gas, water, oil, or electricity bill.	1.8%

"Before Thanksgiving break, all I did was worry where I was going to go"
-current NC State student

"Whenever leaving the dorms was mandatory for breaks and moving in/out, I had to save up for gas otherwise I couldn't get home because my dad didn't have it"   *-former NC State student*

Housing Safety

Feeling unsafe in housing contributes to housing insecurity as students seek to find better accommodations. Most students reported feeling at least somewhat safe in their current housing. About 2% did not feel safe in current housing and 3% did not yet have a safe affordable place to stay during a school break when university housing closes.

Table 8. *Safe Living Situation*

How safe do you feel where you currently live?	
Not at all safe	0.2%
A little bit safe	1.9%
Somewhat safe	14.8%
Very safe	57.6%
Extremely safe	25.5%
Do you have a safe, affordable place to stay when campus closes during the upcoming winter break?	
Yes	97%
No	1%
Not sure yet	2%

Demographic Characteristics of the Participants

Food insecurity and homelessness were prevalent among both women and men. Although students with Hispanic origin made up only 6% of the sample, they represented about 9-10% of students who experienced food insecurity and homelessness. Students who identified as African American or Bi-/Multiracial were more likely to be food insecure relative to their representation in the full sample. Students who identify as transgender or whose gender identity does not align with male or female were more likely to have experienced a period of homelessness compared to their representation in the sample. These patterns of higher food insecurity and homelessness among students of color and trans students are highly stable findings across studies[24, 25]

Table 9. *Demographic Characteristics*

	Full sample	**Homeless past year**	**Food insecure**
Gender (self-identified)	*n*=1764	*n*=162	*n*=207
Female	56.0%	54.3%	62.3%
Male	43.2%	43.2%	36.2%
Other (transgender or "I use a different term")	0.8%	2.5%	1.4%
Race	*n*=1758	*n*=162	*n*=208
White	71.3%	70.4%	69.2%
Asian	14.9%	16.0%	14.4%
Bi- or Multi-racial	5.3%	5.6%	6.3%
African American	4.7%	2.5%	6.3%
American Indian or Alaska Native	0.2%	0%	0%
Native Hawaiian or other Pacific Islander	0.1%	0.6%	0%
Other	3.5%	4.9%	3.8%
Hispanic/Latino or Spanish origin	*n*=1754	*n*=163	*n*=207
Yes	6.0%	9.8%	8.7%
No	94.0%	90.2%	91.3%
Mean Age (*SD*)	21.74 (4.4)	21.88 (4.0)	21.54 (3.3)

Educational Status

Both food insecurity and homelessness were prevalent among full-time and part-time students as well as undergraduate and graduate students. The rate of homelessness was slightly higher for graduate students relative to their representation in the sample. Food insecurity was slightly more prevalent in undergraduate students relative to their representation in the sample.

The large majority of all students who replied to the survey reported a high GPA; this might reflect a general tendency for students who are doing well academically to respond to research surveys. The impact of food and housing insecurity on academic functioning will be explored more deeply in follow-up interviews and focus groups to be conducted later this academic year.

Table 10. *Educational Status*

	Full sample	Homeless past year	Food insecure
Enrollment	*n*=1922	*n*=162	*n*=212
Full time	94.7%	93.8%	95.8%
Part time	5.3%	6.2%	4.2%
Degree seeking	*n*=1922	*n*=162	*n*=212
Associate's degree	1.1%	1.2%	1.4%
Bachelor's degree	71.0%	66.7%	74.5%
Graduate degree	27.8%	32.1%	24.1%
GPA	*n*=1695	*n*=140	*n*=195
3.0-4.0	87.8%	90.0%	81.5%
2.0-2.9	12.1%	10.0%	18.5%
1.0-1.9	0.1%	0%	0%
Number of years pursuing current degree	*n* = 1921	*n*=162	*n*=212
1	34.0%	38.3%	26.9%
2	14.1%	15.4%	15.1%
3	19.4%	16.0%	21.7%
4	19.2%	20.4%	19.8%
5	10.3%	6.8%	13.2%
6	2.1%	1.9%	2.8%
7	1.0%	1.2%	0.5%

I used to hate the feeling of someone telling me 'you are so lucky that financial aid pays for everything', when little do they know that financial aid cannot even begin to deal with the scope of my problems. The even bigger problem is the feeling of being a fish out of water.   *--Current NC State student*

Work Situation

Our data indicate that a very large percentage of NC State students are working, and many of them are working more than part-time. The percentage of students looking for work or working one or more jobs was higher among those who experienced food and/or housing insecurity. It is particularly noteworthy than 37% of students who were food insecure were working *more than 20 hours a week.*

Table 11. *Work Situation*

	Full sample	Homeless past year	Food insecure
In the last 30 days, looked for work	30%	38.7%	42.0%
In the last 30 days, worked for pay	54.7%	62.6%	63.7%
In the last 30 days, held more than one job	24.4%	30.4%	34.1%
Number of hours worked/week			
1-10	34.1%	29.4%	31.1%
11-20	40.6%	42.2%	31.9%
21-30	12.3%	16.7%	24.4%
31-40	6.4%	3.9%	5.9%
More than 40	6.6%	7.8%	6.7%

Note. Sample sizes differ by item. *N* for full sample: 1017-1904. *N* for homeless past year sample: 102-163. *N* for food insecure sample: 135-212

Means of Paying for Expenses Associated with Attending NC State University

Students used various forms of paying for school. Students who experienced homelessness and food insecurity were more likely than the full sample to use personal savings and credit cards to pay for expenses associated with attending college. More than one fourth of students who experienced homelessness received either NC State and/or merit-based scholarships. A higher percentage of students who were food insecure had a work-study job, other job, and used Pell grants and loans in comparison to the full sample.

Table 12. *Means of Paying for College*

	Full sample *n*=1949	Homeless past year *n*=163	Food insecure *n*=212
Work-study	8.3%	8.0%	9.9%
Other job (not work study)	32.7%	40.5%	47.6%
Pell Grant	13.0%	12.9%	22.6%
Other grants	24.9%	23.9%	29.7%
NC State grant or scholarship	33.2%	38.0%	33.0%
Merit-based scholarship	21.8%	25.2%	21.7%

Student loans	39.8%	39.9%	54.7%
Family and friends	54.7%	57.1%	51.4%
Personal savings	29.9%	38.7%	39.2%
Credit cards	7.6%	13.5%	16.5%
Employer contribution	3.1%	2.5%	0.9%
529 College savings plan	5.5%	10.4%	5.7%
Graduate assistantship	2.5%	4.3%	0.9%

I was working 11 PM to 7 AM on weeknights and weekend at the hospital trying to make ends meet. I was working a second job on top of that and barely staying awake in the process.

-current NC State student

Sources of Assistance Used Over the Past 12 Months

Although students who experienced housing and/or food insecurity used various benefits at higher rates than the full sample, the very low rates of use of assistance among all students is worthy of note. Particularly striking was the finding that very few students who were food insecure had received SNAP or used a food bank. This finding highlights potential points of intervention (e.g., reducing stigma associated with help-seeking, increasing access by lowering barriers).

Table 13. *Sources of Assistance*

	Full sample $n=1949$	Homeless past year $n=163$	Food insecure $n=212$
SNAP benefits (i.e., food stamps)	1.0%	1.2%	1.9%
WIC (Nutritional assistance for pregnant women and children)	0.2%	0.6%	0.9%
TANF (Temporary Aid for Needy Families; public cash assistance)	0.1%	0%	0%
SSI (Supplemental Security Income)	0.1%	0%	0%
SSDI (Social Security Disability Income)	0.2%	0.6%	0.9%
Medicaid or public health insurance	3.9%	4.9%	5.7%
Food bank	0.8%	1.8%	2.8%
Child care subsidy/assistance	0.4%	0.6%	0.9%
Unemployment compensation	0.2%	0.6%	0.9%
Utility assistance	0.1%	0%	0%
Subsidized housing assistance	0.1%	0.6%	0.5%
Transportation assistance	0.7%	1.2%	0.9%

Tax refund	14.7%	19.0%	15.1%
Earned Income Tax Credit (EITC)	0.9%	1.2%	0.9%
Veteran's benefits (benefits for serviceman's widow's, survivor's pension; service disability; GI bill)	1.3%	0%	2.8%

"I really wish I would have applied for SNAP benefits sooner! It feels so great to be able to get healthy, nutritious food for once…I finally can eat healthy balanced meals and I don't have to worry about going hungry at school. I am able to focus better in class and it has alleviated a lot of my depression".

"There is a huge stigma in our society when it comes to asking for help. Look at how the general public views food stamps and Medicaid recipients. I know because I was on those programs"   *–current NC State student*

Students Helping Others over the Past 12 Months

Students helped each other by giving money or food and by allowing others to stay at their home if they had nowhere else to go. Helping others was about twice as prevalent in the group of students who had experienced food insecurity or homelessness themselves. More than one fourth of students who were food insecure gave food to others. Almost 30% of students who had experienced homelessness over the past 12 months gave money to support friends or family members. These noteworthy findings deserve further exploration and will be a focus of interviews with students in our upcoming study.

Table 14. *Helping Behavior*

	Full sample *n*=1949	Homeless past year *n*=163	Food insecure *n*=212
Gave money to a friend or family member to help them make ends meet.	12.8%	28.2%	23.6%
Let another student stay at your home because the person had nowhere else to stay.	6.8%	13.5%	15.1%
Provided food for another student because they didn't have money for food and had skipped meals.	11.7%	21.5%	26.9%

RESEARCH PLAN: NEXT STEPS

Included in the student survey are items related to **sleep** and student **well-being**. We are in the process of analyzing those data. Based on the literature, we expect that students who are food and/or housing insecure will report lower well-being compared to students considered food and housing secure.

We will also be exploring food and housing as they relate to students' experiences as:

- first generation college students,
- veterans,
- international students,
- students with disabilities,
- student athletes, and
- students who are parenting children in their homes

The survey data generated many questions about the **lived experiences** of students. In summer 2018, focus groups and individual interviews will be conducted with students who struggle with food and/or housing insecurity. The purpose of collecting those data will be to gain greater depth of understanding about the **successes and struggles** these students have experienced and to learn from them about ways NC State and Wake County can more fully engage and support them to ensure food and housing security. We are especially interested in learning about students' perspectives on **barriers** to accessing resources and potential solutions to eliminating those barriers.

It's incredible how much easier and better life seems to be when you have your most basic necessities fulfilled. My family is so happy that we don't need to spend so much on food and we can save more money to help pay for other bills. I will forever be thankful to TRIO for helping me in other ways besides counseling, their advice and support really helped improve the quality of my life. I can wholeheartedly say that because of TRIO's support, I was able to overcome most of my troubles in college.

I am glad to say that despite everything throughout these tough four years, I will be graduating this May with a bachelor's in Human Biology and I will be continuing my education by attending PA school. I hope my story will inspire others who are in a similar situation as me and encourage them that even when life seems to be at its dimmest, there are plenty people here at NCSU who can help you in many different ways and will support you throughout your college career.

-current NC State student

Resources for Additional Information

Capital Area Food Network a community of Wake County citizens working together to support, sustain, and improve our local food system. https://capitalareafoodnetwork.wordpress.com/

First Generation Foundation: Connects first-generation college students to colleges and universities and organizations dedicated to helping 1st Gen students succeed. http://www.firstgenerationfoundation.org/

Institute for Higher Education Policy: Committed to improving college access and success in higher education for all students, with a special focus on underserved populations. http://www.ihep.org/

National Association for the Education of Homeless Children and Youth: A national membership association that connects educators, parents, advocates, researchers, and service providers to ensure school enrollment and attendance and overall success for children and youth whose lives have been disrupted by the lack of safe, permanent, and adequate housing. http://www.naehcy.org/

National Center for Homeless Education: NCHE operates the U.S. Department of Education's technical assistance and information center for the federal Education for Homeless Children and Youth (EHCY) Program. https://nche.ed.gov/

National Network for Youth: The mission of the National Network is to mobilize the collective power and expertise of our national community to influence public policy and strengthen effective responses to youth homelessness. https://www.nn4youth.org/

Schoolhouse Connection: A national organization working to overcome homelessness through education. https://www.schoolhouseconnection.org/

Single Stop: Provide coordinated access to the safety net and connect people to the resources they need to attain higher education, obtain good jobs, and achieve financial self-sufficiency – all through a unique one-stop-shop. http://singlestopusa.org/#home-page

U.S. Department of Education: On students exiting foster care. https://www2.ed.gov/about/inits/ed/foster-care/index.html

Wisconsin HOPE Lab: Laboratory for translational research aimed at improving equitable outcomes in postsecondary education. The Lab makes findings from basic science useful for practical applications that enhance college attainment and human well-being. Goal is to help policymakers and practitioners (a) accurately state the costs of attending college, (b) ensure that families and students understand these costs, and (c) find effective ways to cover these costs that enhance degree completion rates as well as the personal and societal benefits of postsecondary education http://wihopelab.com/

Acknowledgements

We extend sincere appreciation to the students of NC State whose direct quotes we included in the document to bring life to our data. We also appreciate the students who gave their time to complete the survey.

Nancy Whelchel in the Office of Institutional Research and Planning provided valuable assistance with all stages of survey development and administration.

Funds to purchase gift cards for survey participant incentives were provided by the NC State Diversity Mini-Grant Program administered by the Office for Institutional Equity and Diversity.

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- Carolyn Bird; Department of Agricultural & Human Sciences; Chair of Faculty Senate
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- Mary E Haskett; Department of Psychology
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Community Steering Committee members:
- Gideon Adams, Capital Area Food Network
- Danielle Butler, Family Promise; Raleigh/Wake Partnership to End Homelessness
- Maggie Kane, A Place At The Table
- Josh Monahan, 1in6 Snacks
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