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Addressing and preventing food and housing insecurity among college students: An asset-based approach

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Abstract

Universities have implemented a range of initiatives to address food and housing insecurity, but few studies have examined how campus communities are engaging around these issues. This article explores how North Carolina State University conducted asset-mapping workshops, a community-based participatory research (CBPR) method, to mobilize the campus community and identify solutions to address the root causes of food insecurity and other forms of basic needs insecurity among students. Workshop participants identified exemplary resources focused on addressing students' immediate needs (e.g., campus food pantries, a student emergency fund). At the same time, they stated that basic needs insecurity is tied to longer-term, systemic issues like wage inequality and a lack of affordable housing. Participants also noted that historically marginalized students (e.g., LGBTQ+, low-income, first-generation college) often experience food and housing insecurity in complex ways requiring targeted solutions. Our results suggest that CBPR methods like asset mapping offer an approach that, when done well, can center the voices and experiences of diverse campus populations to identify and address the complex structural and systemic processes that shape students' experiences of food and housing insecurity.

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Introduction

Food insecurity is widespread on many college and university campuses. A 2019 review of 31 studies found food insecurity rates among college students ranging from 9% to over 50% (Larin et al., 2018). Food insecurity is often linked to other forms of basic needs insecurity, including housing insecurity.[1] Research on housing insecurity among college students is more limited, but data from four surveys of over 30,000 college students revealed that half of students at two-year colleges and between 11% and 19% of students at four-year universities reported housing insecurity (Broton & Goldrick-Rab, 2018).

Students who experience food insecurity and other forms of basic needs insecurity often struggle academically and are less likely to graduate. One study found that severely food-insecure students were 15 times more likely to have failed a course and 6 times more likely to have withdrawn or dropped out (Silva et al., 2017). Students experiencing homelessness were 13 times more likely to have failed a course and 11 times more likely to have withdrawn or dropped out. Research also finds that students who experience food insecurity are more likely to take a leave from school due to financial constraints (Martinez et al., 2020) and have lower GPAs (Camelo & Elliott, 2019; Martinez et al., 2019; Patton-López et al., 2014). Students who are food insecure report poorer health outcomes (Knol et al., 2017; McArthur et al., 2018) and are more likely to report symptoms of depression (Payne-Sturges et al., 2017) than food-secure students.

Patterns of food insecurity among college students are tied to broader social and economic inequities. Non-white students, student parents, students in urban areas, students living off campus, former foster youth, high users of financial aid, low-income students, and first-generation students are more likely to experience food insecurity and other forms of basic needs insecurity (Broton & Goldrick-Rab, 2018; Chaparro et al., 2009; Gaines et al., 2014; Haskett, Kotter-Grühn et al., 2020; Haskett et al., 2021; Maroto et al., 2015; Martinez et al., 2019; Payne-Sturges et al., 2017;).

Researchers and policymakers have called on universities to better address basic needs insecurity, and many colleges and universities have tried. A recent survey found that almost all responding institutions (*N*=469) had at least one service dedicated to this issue (American Association of Collegiate Registrars and Admissions Officers [AACRAO] & The Hope Center for College, Community, and Justice, 2020). Existing initiatives include food pantries, emergency aid programs, and centralized student services (Patton-López et al., 2014). However, these responses are inadequate. University responses tend to be disparate and focused on providing emergency support, rather than addressing the root causes of basic needs insecurity. Further, students are often unaware of how to access the help they need (Haskett, Kotter-Grühn et al., 2020; Larin et al., 2018; Patton-López et al., 2014).

Because student food and housing insecurity are linked to a host of systemic issues (including rising costs of tuition, cuts to public funding for higher education, insufficient financial aid, and a weak part-time labor market) (Freudenberg et al., 2019), efforts to address them should also be systemic. To determine how to act and mobilize the support needed for systemic changes, it is necessary to engage diverse coalitions of students, faculty, staff, and administrators. Yet few studies have examined how to effectively engage campus stakeholders, including students, in this work. This article explores how North Carolina State University (NC State), a large public university in the southeastern United States, used the community-based participatory research (CBPR) method of asset mapping to engage students and university stakeholders in key decision-making processes around addressing food and housing insecurity.

[1] "Basic needs" generally refers to food, shelter, and clothing needs; some definitions include sanitary, educational, and healthcare needs. Most research on this topic focuses on food and/or housing insecurity (Broton & Goldrick-Rab, 2016; Camelo & Elliott, 2019; Freudenberg et al., 2019).

Contextual Background

This article describes asset-mapping workshops conducted in April 2019 at NC State University to understand and address food and housing insecurity among students. All activities took place prior to the COVID-19 pandemic, which has likely exacerbated the experiences described here. At the time of the workshops, approximately 26,000 undergraduate students and 11,000 graduate and professional students attended NC State, which is located in Raleigh, North Carolina, a city of over 450,000 people. The Raleigh-Durham metropolitan area is one of the fastest-growing in the country (Ordoñez, 2020); although people have moved to the area in part because of its relative affordability, population growth has led to recent increases in the cost of living, as we discuss later in the paper. Notably, the North Carolina public university system is one of the most affordable in the country for in-state students (for two-year and four-year institutions), and affordable tuition is enshrined in the state constitution (Moore, 2018). Even so, in recent years, tuition has increased as public spending on higher education has decreased, falling 17% since 2008 (State Higher Education Finance, 2021).

According to a representative survey conducted in October 2017, 14% of NC State students had experienced low or very low food insecurity over the previous 30 days (using the 10-item USDA Adult Food Security Survey Module [FSSM]).[2] Nearly 10% of students had experienced homelessness over the previous 12 months (Haskett et al., 2018). The rate of food insecurity was at the low end of the wide continuum found in the literature, whereas the rate of homelessness was at the high end (Haskett, Kotter-Grühn et al., 2020). Women and Latino/a/x students were overrepresented in the food insecure group (Haskett, Kotter-Grühn et al., 2020). Students who identified as LGBTQ appeared to be at elevated risk for food insecurity and homelessness; the authors of the report concluded that there is a need for additional research on the connections between sexual orientation, gender identity, and basic needs insecurity among college students (Haskett, Kotter-Grühn et al., 2020). There were few significant differences in food security status and homelessness by race, but the authors concluded that these effects might be underestimated due to small samples for some racial groups (Haskett, Kotter-Grühn et al., 2020).

Based on the results of the survey, a group of concerned students, faculty, and staff formed the Pack Essentials Steering Committee to ensure that students have "access to sufficient, nutritious, culturally appropriate and affordable food and safe, affordable housing accessible to the university" (Butler & NCSU Office for Institutional Equity and Diversity [OIED] Staff, 2018, para. 2). The committee was led by a faculty member with expertise in this field and an administrator in student supportive services and advised by a college dean. Members included faculty and advisors representing multiple colleges; graduate and undergraduate student representatives; directors of dining, housing, and wellness services; staff who work with library, financial aid, and student support services; and the university's student ombudsperson. As part of its efforts, the committee organized asset-mapping workshops to engage key stakeholders in discussing how to advance from *supporting* students during financial emergencies to *addressing* food and housing insecurity's root causes.

Methods

The asset-mapping workshops are based on the Participatory Inquiry into Religious Health Assets, Networks, and Agency (PIRHANA) framework (Olivier et al., 2012). The workshops had four overarching goals: (1) identifying existing assets related to addressing food and housing insecurity; (2) identifying structural factors that shape how students experience food and housing insecurity, to better identify resources to address these; (3) articulating differences in how students, faculty, staff,

[2] The U.S. Department of Agriculture (USDA) Adult Food Security Survey Module uses 10 questions to assess food security status among adults (USDA ERS, 2012). Food insecurity is assessed over the previous 30 days. Respondents are classified as experiencing high, marginal, low, or very low food security. Respondents who reported experiencing "low" or "very low" food insecurity were classified as food insecure. See Haskett et al. (2020) for additional details about how responses were classified.

and community stakeholders perceive assets and needs; and (4) determining priorities and steps for future action to address gaps and needs. We first explain why the Pack Essentials Steering Committee chose the participatory method of asset mapping. We then provide details on the process of organizing and facilitating the workshops and collecting and analyzing data from them.

Why Asset Mapping?

Asset-mapping is a participatory method that examines communities' assets and resources in order to build on those assets and create strategies for change (Blevins et al., 2012; Emery & Flora, 2006). At its core, CBPR uses collaborative methods to engage communities in all aspects of the research process to take action and create change (Viswanathan et al., 2004). By engaging faculty, staff, and students (including students in groups that are more likely to experience food and housing insecurity) in facilitating the workshops, interpreting the results, and identifying strategies for further action, the workshops described here adopt the key tenets of CBPR.

In short, asset-mapping approaches elicit, from a broad spectrum of community members, the intrinsic strengths and resources that exist in local contexts but are often overlooked by people working outside these communities and contexts. Importantly, instead of focusing on needs or shortcomings, asset-based approaches highlight communities' existing strengths and consider why those resources are deemed important (Jakes et al., 2015). Asset mapping has successfully engaged communities in identifying and building on their strengths to address a range of complex issues (Emery & Flora, 2006; Florian et al., 2016; Jakes et al., 2015; Reppond et al., 2018). Food justice scholars argue that participatory approaches like asset mapping offer a promising equity-based approach to food insecurity (De Master & Daniels, 2019; Scorza et al., 2012). Rather than defining people and communities as problems (for example, labeling communities as "food deserts"), these approaches resist those narratives and aid in "informing more textured, nuanced understandings of community food access, disrupting stigmatizing gazes, and inviting community engagement with creative visualizations" (De Master & Daniels, 2019, p. 242). The Pack Essentials Steering Committee recognized that asset-mapping methods could help mobilize the campus community in addressing food and housing insecurity while also centering students' voices and narratives.

Workshop Participants

All four authors were involved in the process of organizing and facilitating the workshops. The steering committee recruited a diverse group of participants by working with student organizations, faculty, and staff across the university, focusing on organizations that support first-generation students or students who face basic needs insecurity. To broaden the pool of participants beyond these organizations, the authors developed and sent a flier to various campus email lists (for example, for student organizations). We did not specifically recruit students experiencing food or housing insecurity or track whether participants were experiencing food or housing insecurity, as we felt this would undermine confidentiality and potentially make some participants uncomfortable (Peterson et al., 2022). However, we deliberately sent fliers to organizations that support students experiencing these issues and/or represent students that are likely to experience food insecurity (for example, students of color, student parents, first-generation students, and international students). The authors and facilitators worked to recruit diverse participants in terms of race, ethnicity, gender, sexuality, college major, and year in school whenever possible.

Twenty-eight faculty and staff members and 37 students participated in the workshops. Of the 65 people who attended the first round of workshops, 40 attended the follow-up strategic planning session. We collected additional details about the gender, racial, ethnic, and sexual identities of participants via a brief demographic survey. The study was approved by NC State's Institutional Review Board, and all participants signed a form consenting to participate. The workshops were audio recorded and transcribed by a transcription company. Workshop facilitators also took turns taking notes during workshop sessions they were not leading.

Workshop Structure

The workshops were held over two days in April 2019. On the first day, two separate student groups met. Both groups included both undergraduate and graduate students. On the following day, faculty and staff met without students. These initial workshops—two student workshops and one employee workshop—focused on identifying key drivers of food and housing insecurity on campus and mapping existing resources and assets. In the afternoon of the second day, we invited all participants to come back together to identify priorities and outline steps needed to achieve those goals. The authors, three white women and one Latina woman, served as primary workshop facilitators. We also trained three undergraduate students (a Black woman, an Asian woman, and a Native American man) and two staff members (a Black woman and a Latina woman) as co-facilitators. We aimed to ensure that facilitators were racially diverse and represented the major sectors of the campus community (a mix of graduate students, undergraduate students, faculty, and staff). In the workshops, facilitators asked participants to define the root causes of food and housing insecurity, identify community and university assets that could be used to address food and housing insecurity, consider how assets could be combined or used in new ways, and propose concrete strategies for action.

Graphs Over Time

Each workshop started by identifying factors contributing to student basic needs insecurity, using an exercise called Graphs Over Time. Graphs Over Time exercises are used frequently in participatory research to promote systems thinking, generating discussion around the complex processes and systemic issues that shape whether and how students experience food and housing insecurity (Calancie et al., 2018). Facilitated discussions about the graphs can "capture how the issue of interest and other relevant factors change over time" (Frerichs et al., 2020, p. 5). Therefore, although this is not a traditional asset-mapping activity (in that it does not focus exclusively or mainly on assets or resources), by prompting participants to reflect on the broader context, the Graphs Over Time exercise helped set the stage for a more nuanced discussion of the resources that best address the issues of interest.

In our workshops, we asked participants to draw line graphs of trends that they perceived could have affected basic needs insecurity among NC State students over the last two decades. For example, to represent an idea of how costs of college have increased, participants might graph their estimate of the average price of tuition over time. Although participants made multiple graphs during the brainstorming phase, each person then selected one to put up on the board while avoiding duplication with other participants' graphs. Facilitators then led a discussion about overarching patterns in the graphs. During the workshops, one of the facilitators categorized graphs into contributing factors (described in more detail in the findings—for example, "increased costs of living"). Participants then voted on the contributing factors that they felt were most relevant to basic needs insecurity at NC State. Each participant voted using three stickers, which they could apply in a variety of ways to demonstrate intensity. If they felt strongly about a particular contributing factor, they could use all three stickers on that category; if they felt that three categories were equally important, they could apply one sticker to each.

Exemplars and Values

In the next activity, participants identified organizations and programs on campus and in the larger community that address food and housing insecurity among students. In the student workshops, students drew maps that located these organizations and programs spatially. Since our focus was on students' experiences of food and housing insecurity, we did not have employees draw maps. Instead, faculty and staff made lists of these organizations on index cards. In all workshops, participants then voted on the most exemplary organizations—the organizations they felt were doing the best work related to housing or food insecurity. When voting, each participant again had three stickers to use; they could put all three on one organization or distribute them among multiple organizations. Following the vote, facilitators listed the exemplars with the most votes. Facilitators led participants in a discussion of why these organizations were exemplary, and participants voted on their top reasons.

Key questions asked by facilitators during this conversation included: "What are these organizations or programs doing that other organizations aren't?" and "Why do students go to these places most often?"

Strategic Planning

After the student and faculty/staff workshops, all participants were invited to a joint strategic planning session to determine the next steps for addressing the higher-level causes of basic needs insecurity at NC State. We started the strategic planning session by reviewing findings from previous workshops. Participants were then divided into groups of four to seven participants; groups included a mix of students, faculty, and staff. Facilitators assigned each group to focus on either food or housing insecurity. To begin, individuals recorded potential strategies on a sticky note, which they then shared with their group. Participants categorized strategies according to the campus group that would take action around their strategy.[3] They did this by placing the sticky notes on a posterboard with the following categories: (1) students and student organizations, (2) faculty members, (3) campus programs and organizations, and (4) university administrators. After giving each member time to develop and categorize their ideas, the groups discussed all the ideas and determined one promising strategy to share with the full group. Before the end of the workshop, facilitators asked each participant to write down one concrete step they could take to improve basic needs security among students. Examples included "adding a statement on basic needs security to my syllabus" and "sharing information about campus resources with others."

Analysis

We used quantitative and qualitative methods to analyze the data generated in the asset-mapping workshops. We did two rounds of analysis, during and after the workshops. During the workshops, workshop leaders synthesized responses and recorded tallies of any votes or polls, according to responses made during each activity. For example, during the exemplar activity, leaders lined up the sticky notes on a white board or the floor to create a visual graph of sticky notes so that participants could see the data in real time. Additionally, we kept the sticky notes and index cards that participants created. After the workshops, we entered the information written on the cards into a spreadsheet so they could be organized, summarized, and analyzed in more detail (as shown in the charts below). The graphs (from the Graphs Over time exercise) were analyzed similarly. Overall, workshop participants discussed 47 student graphs and 48 employee graphs. We also collected and coded extra graphs (85 among students, 14 among staff); these were often duplicate graphs but gave useful information about frequency. After the workshops, the first two authors used NVivo, a computer-assisted qualitative analysis software (CAQDAS) program, to code and analyze the graphs and index cards. We classified the graphs by workshop (one of the student workshops or the faculty/staff workshop), workshop activity (for example: graphs over time, exemplars and values) and whether the graph was included in the discussion. The two first authors coded the graphs and index cards separately, met to discuss the process, and developed a codebook based on the discussion.

Our coding process for the graphs and index cards is akin to in-vivo coding, which "prioritize[s] and honor[s] the participant's voice" (Saldaña, 2012, p. 91). The codes thus reflect the way participants themselves described key factors. For example, two codes were *food cost* and *bad jobs*. Eventually, researchers collapsed codes into several key issues; for example, *cost of living* included subcodes for housing, food, and healthcare costs, and *employment issues* included subcodes for living wage, necessity of college degree, and bad jobs.

As a team, we also listened to and transcribed notes taken during sessions, looking for key quotes that either aligned with or diverged from the findings generated during the earlier analysis of index cards or graphs for each workshop activity. In identifying key statements, we focused both on the assets that people identified (key resources or pro-

[3] To give a few examples, proposed strategies included implementing mandatory training around basic needs resources for instructors, developing emergency temporary housing programs, and increasing stipends for graduate students.

grams) and the underlying values and assumptions, which Jakes and colleagues (2015) note are critical to developing sustainable and community-driven solutions for change. The quotes thus give additional context to the thematic analysis described above. Below, we present participant quotes as supportive data; in some cases, quotes have been lightly edited for clarity and grammar, but not in a way that changes the meaning.

Positionality Statement

All four authors were involved in the design and facilitation of the workshops. Two of the authors are white cisgender women and tenured faculty who study food insecurity and community engagement across projects spanning more than 10 years. Two authors are cisgender women Ph.D. candidates. One student is a Latina Ph.D. candidate from Mexico and the other student is a white woman from the United States. Both students have conducted research on food insecurity and community engagement throughout graduate school and have volunteered or interned with organizations focused on food systems inequality. Approximately 18 months after the workshops concluded, one of the student authors began working for NC State's student basic needs and emergency aid office, which assists students in need with food, housing, or other basic needs. In addition to facilitating the workshops, all authors were involved in recruiting participants from a variety of backgrounds to ensure the representation of multiple identities.

Results

Workshop participants were diverse in terms of race and ethnicity (see Table 1). However, some groups of people were underrepresented. Among both groups (faculty/staff and students), more women participated than men. Almost a quarter of students participating identified as LGBQ+. However, few faculty or staff identified as LGBQ+, and no trans or nonbinary students or faculty or staff participated.

Table 1. Demographic Data of Workshop Participants

Demographic Categories	Faculty and Staff (*n*=28)	Faculty Population*	Students (*n*=37)	Campus Population [a]
Gender Identity				
Man	4 (14%)	1,453	8 (22%)	19,014 (52%)
Woman	24 (86%)	1,004	29 (78%)	17,290 (48%)
Nonbinary/Trans [a]/Other	0 (0%)	[b]	0 (0%)	[b]
Sexual Orientation				
Straight/ Heterosexual	22 (79%)		26 (78%)	
LGBTQ+	2 (7%)		9 (24%)	
No response	4 (14%)		2 (6%)	
Race and Ethnicity				
White	13 (46%)	1,793 (73%)	14 (38%)	22,406 (62%)
Black/African American	9 (32%)	113 (5%)	9 (24%)	2,258 (6%)
Asian/South Asian	1 (4%)	230 (9%)	6 (16%)	2,432 (7%)
Latino/a/x or Hispanic	3 (11%)	103 (4%)	4 (11%)	2,2011 (6%)
American Indian or Alaska Native	1 (4%)	3 (0.1%)	0 (0%)	138 (0.4%)
Mixed race, Other	1 (4%)	107 (4%)	3 (8%)	1,207 (3%)
Unknown	0 (0%)	105 (4%)	1 (3%)	1,689 (5%)

[a] Data for the campus population come from the 2019 university census (NCSU ISA, 2019). In the census, "non-resident alien" is included as a separate category, so these numbers do not add up to 100%.

[b] In this year of the university census, gender was tracked as binary man/woman.

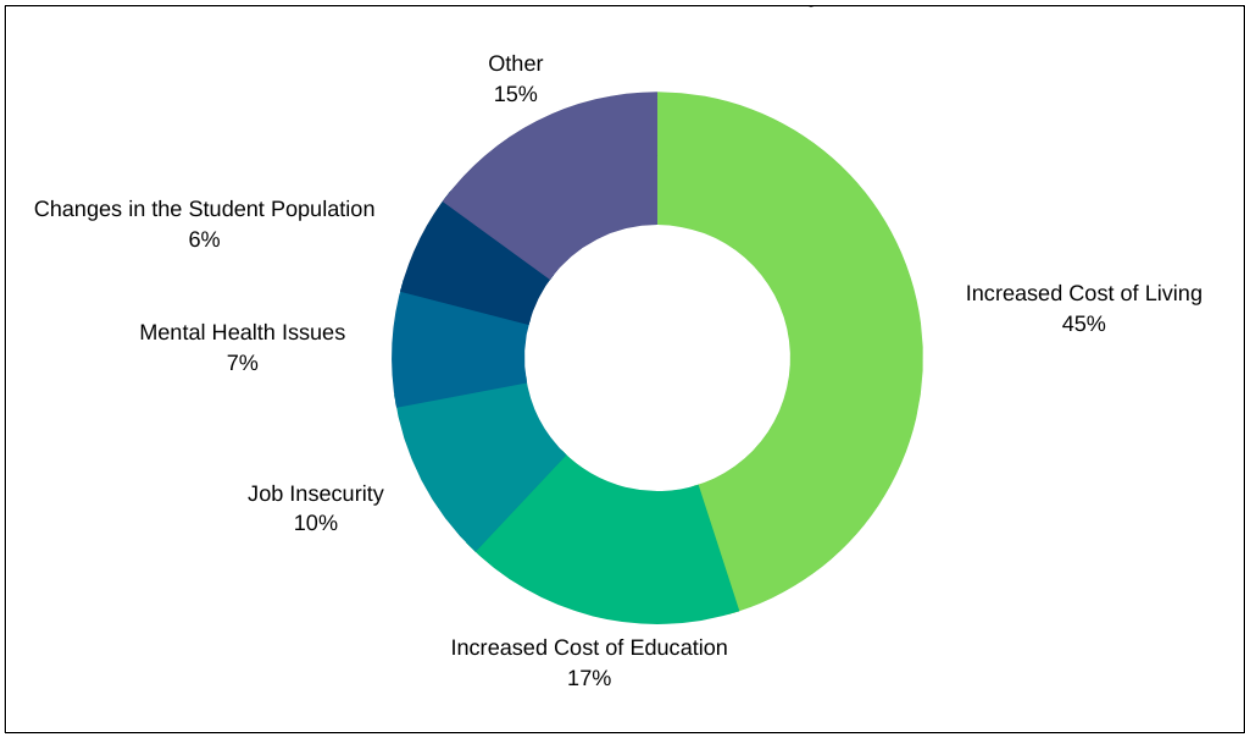
Contributors to Food and Housing Insecurity: Student Responses

During the Graphs Over Time activity, students overwhelmingly identified the high and rising costs of living and education, as well as job insecurity, as contributors to food and housing insecurity (see Figure 1). "Increased cost of living" represented the largest category, accounting for almost half (45%) of student graphs. Within this category, housing costs were most frequently mentioned, accounting for almost half of the cost-of-living graphs (44% of graphs within this category, 20% of total). Students cited a lack of affordable housing and a general rise in Raleigh's housing costs. "The supply of affordable housing is outrun by the demand for affordable housing," noted an international graduate student. The second-most-mentioned category was the cost of food, both on campus and off (29% of cost-of-living category, 13% of total). An undergraduate student explained that "the increasing cost of the dining plans" contributed to food insecurity. "If it was cheaper, more students could afford it," they explained. "The cheapest [plan] doesn't provide as many swipes."

Students connected the rising costs of living to broader structural factors. For example, one graduate student argued that universities focused their marketing efforts on wealthy students and ignored other students' needs. They explained, "They have these glossy images of luxury stuff, like updated dorms … and I think the housing in this city reflects that, too. … But it's not actually fulfilling the needs of the students. We're paying the fees for things that many of us will never use." (The student here is referring to the mandatory fees that all students pay, even when they are funded by assistantships. These fees can represent 10% of graduate students' net stipends.)

Students also emphasized how food and housing access intersect. A graduate student stated that the "gentrification of downtown Raleigh" had contributed to higher rents; they explained that gentrification is why "there is a Whole Foods but not a

Figure 1. Perceived Contributors to Food and Housing Insecurity Among Students, Based on Workshops with Students



Data: Graphs Over Time activity in the student workshops.

Food Lion near [campus]" (contrasting high-end and conventional grocery chains), which in turn leads to higher food costs for students.

Second, students identified the "increased cost of education" as contributing to food and housing insecurity. Students emphasized how education costs had risen faster than wages and financial aid. One graduate student explained that their department had recently raised graduate student stipends for the first time in years, but student fees had continued to increase every year. Another undergraduate student agreed, explaining, "Just thinking about if you have a certain amount of money that you're going to allocate towards your education, and the fees keep rising, tuition keeps rising, the cost of your courses and everything like that [keeps rising]. … The money slowly depletes, and then you don't have any wiggle room. …" Participants noted that these concerns were especially salient for first-generation college students and students from economically disadvantaged backgrounds.

Third, students cited stagnating "job insecurity" and stagnating wages as contributors. Many of the students who participated in the workshops worked in addition to attending school but noted that it was difficult to find well-paying jobs. "[Wages] are not keeping [up] with inflation," commented a graduate student. An undergraduate student noted that "work-study jobs are [often] minimum wage and it's not anything that you can live off of." In addition, students noted the tension between having to work to cover basic needs and being able to invest in their future. As one undergraduate student explained, some students can focus on "work to get good grades and increase their professional development," while others have to work to pay their bills. In other words, having to work to pay for school may mean some students miss out on low-paying or unpaid internships or leadership opportunities that offer long-term benefits.

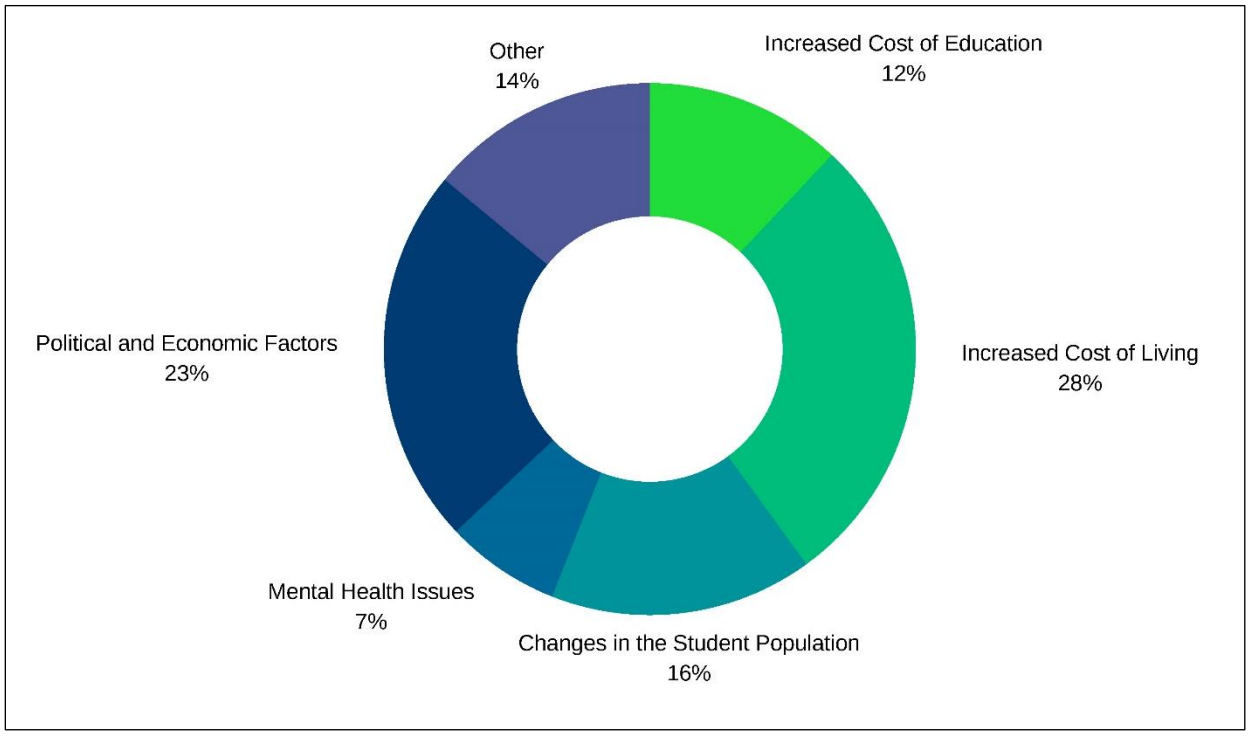
In sum, students cited the rising costs of living and education and job insecurity as the main factors contributing to basic needs insecurity. Students mentioned several other factors. They noted that the shrinking government safety net exacerbates these problems. An undergraduate student explained that "people don't want to apply to SNAP" because of stigma. Consistent with other research on student participation in food assistance programs (Larin et al., 2018), another student (a social work major) stated that many students were unaware that they qualified for SNAP or other governmental support programs, citing confusion over how many hours students needed to work to qualify. The campus-wide survey discussed above corroborated this finding; it found only 1% of the full sample and 2% of students who were food insecure received SNAP benefits (Haskett, Kotter-Grühn et al., 2020). As one student explained, "If you have an emergency, there are very [few] resources you can turn to … besides immediate family." Many of the students who participated in the workshops, and nearly one-fifth of incoming undergraduate students at NC State, identified as first-generation college or working-class students. Because of this, students emphasized that they and their peers do not have family resources to draw from during difficult times, exacerbating inequalities and reducing access.

Contributors to Food and Housing Insecurity: Faculty and Staff Responses

Faculty and staff also participated in the Graphs Over Time exercise (see Figure 2). Similar to the students, many identified "increased cost of living" as a major factor (27% of all graphs). Again, high housing costs were the most frequently cited concern in this category (52% of responses within the category, 14% of all responses). Compared to students, faculty and staff were much more likely to link basic needs insecurity to "political and economic factors" (23% of all graphs). By this, we mean state and national policies and macroeconomic changes. In this category, faculty and staff cited decreases in the real value of the dollar and in consumers' disposable income and shifts in higher education funding. For example, one participant stated that at NC State and other public universities, "legislative [support] for universities [has] … decreased over time."

Several participants noted how the 2008 recession had contributed to increased economic inequality. "I think some people at the top are able to bounce back from [the recession]," while people at the bottom of the economic ladder were not, explained one participant. Another cited the destabili-

Figure 2. Perceived Contributors to Food and Housing Insecurity Among Students, Based on Workshops with Faculty and Staff



Data: Graphs Over Time activity in the faculty and staff workshop.

zation of the middle class. This is "rooted back in NAFTA," they said, explaining that in recent decades, blue-collar manufacturing jobs have moved out of the U.S., which had "created financial struggles" for families, who were "no longer able to participate in [financing] students' educations." In sum, compared to students, faculty took a wider view of the problem of basic needs insecurity, describing it as a systemic issue rooted in political and economic processes that went back decades, including cuts to public education funding and the safety net, growing economic inequality, and the hollowing out of the middle class.

Faculty and staff also stated that "changes in the student population" contributed to food and housing insecurity. They perceived and valued how the student population had become more economically diverse but felt that the university offered insufficient support for these students (16% of all graphs). Specifically, participants described a growing share of students from low-income households, students who were financially independent from their parents, students caring for dependents, and international students. These perceptions are reflected in university data; for example, a recent summary of the incoming cohort of undergraduate students highlights a 17% increase in first-generation students and a 13% increase in underrepresented minority students over the past year (NC State University Communications, 2021). While faculty and staff applauded the increase in access to higher education, they noted a growing gap between the "haves and have-nots on campus." One noted, "The student population has changed dramatically in the last five years, but the higher education system hasn't changed in one hundred years, and so we're putting students into a system that's not set up for them to succeed."

Overall, like students, faculty and staff emphasized how rising costs of living, particularly related to housing costs, had contributed to food and housing insecurity. Rather than focusing on stagnating wages or a lack of high-paying jobs, faculty and staff emphasized higher-level economic and

political factors that were out of the control even of university administrators. These included cuts to public funding for education in North Carolina and growing economic inequality over the last several decades. By acknowledging the importance of universities' attempts to recruit a more diverse population, while calling out its deficits in supporting these students, participants embraced an equity-based approach, emphasizing that the university has a duty to better support historically marginalized students. As one participant said, "The number of first-generation college students is increasing, which is a success, but we don't have the support system or just the knowledge [about where to find resources]."

Exemplars: Who Is Doing the Best Work, and Why?

A second set of activities focused on asking students, faculty, and staff to identify the organizations, resources, and programs that were doing the most exemplary work to address food and housing insecurity among students. We describe the results below.

Food Insecurity

Across all workshops, participants identified the campus food pantry as one of the top five organizations or programs addressing food insecurity. The Pack Essentials program, an umbrella organization with resources for students experiencing basic needs insecurity, was also identified as an exemplary resource. Participants mentioned the "meal swipe" program and emergency fund, administered by Pack Essentials, as key resources. Through the meal swipe program, students can donate unused guest meal swipes to a pool of meal credits. Administrators then use the pool to create "meal scholarships" (e.g., 10 free meals, or a free month of the meal plan).

Beyond this consensus, there was some variation in the exemplars identified by each group. For example, one student group named NC State Dining as an exemplary organization, because students received a free meal if they worked in campus dining jobs. Participants in two groups (the faculty/staff workshop and one student workshop) identified SNAP as a critical service, highlighting on-campus resources that assist students in determining if they qualify and help them complete SNAP applications. Across both student workshops, participants identified TRIO, a federally supported campus program that assists and advocates for historically marginalized students experiencing academic, career, and life challenges. Faculty and staff emphasized the broad array of student services that were available on campus, including TRIO and others (e.g., financial aid office, counseling center). In general, while some participants mentioned off-campus resources (including off-campus food pantries and a pay-what-you-can café), all groups focused primarily on campus resources.

Housing Insecurity

In all workshops, participants identified Pack Essentials as a key resource for students experiencing homelessness and housing insecurity. They also talked about the importance of local shelters. Beyond this, there was substantial variation in the exemplars named in each workshop. For example, TRIO was listed in both student workshops as a critical resource for students experiencing housing insecurity, whereas faculty and staff named University Housing and the student emergency fund. Students talked about informal resources that they or their friends had used when they needed a place to stay for a night or two, including social networks (friends they could stay with) and campus libraries, which are open 24 hours a day. Students also discussed using social media (e.g., Google Sheets and Facebook Groups) to find information about housing resources. These informal networks did not come up in the faculty/staff workshops.

Values: Why Are These Organizations and Programs Exemplary?

After identifying exemplars, each workshop group discussed why these assets were exemplary. The student groups, but not the faculty/staff group, prioritized accessibility. Students discussed how resources needed to be easy to get to or close to places where students lived, so that students did not need a car to access them. Although accessibility was not explicitly mentioned during the faculty/staff workshop, they noted that it was im-

portant to concentrate resources in one place. As one staff member explained, "It's the one-stop shop. … They don't have to figure it out; they have somebody there that's going to point them in the right direction." Both student groups also emphasized that exemplary organizations did not require proof of eligibility or documentation; they did not make students "jump through a lot of hoops" to prove they were eligible for help.

All groups ranked and valued intangible attributes of exemplary organizations. Students stated that organizations should be knowledgeable about student needs and respond by addressing the specific challenges faced by students in different situations. For example, one undergraduate student group praised organizations that take "an intersectional approach," meaning that they consider and respond to the multiple layers of disadvantage and oppression faced by students. A student in this group explained, "When they [the university] do that work, they need to make sure they're taking into account all non-traditional students, international students, students who may have been okay at the beginning of the year and then they're facing some sort of issue where they have a home to go to but maybe it's not safe for them to go there." These types of insights highlight the need for an equity-based approach that centers the voices and experiences of marginalized students regarding the assets they turn to and why they trust and utilize these organizations and resources. Students stressed that resources were not useful or accessible if their peers were unwilling or unable to take them. Another participant noted that many of the programs and resources addressing food and housing insecurity are targeted at undergraduates, leaving a void for faculty, staff, and graduate students in need. As one participant noted, "When we were looking at housing, is there emergency housing for faculty and staff? No. Graduate students? We're not really sure."

Finally, all groups called for and valued comprehensive, structural solutions that address students' long- and short-term needs. While conversations focused mostly on exemplars and values, some took a critical tone, particularly around what participants described as "Band-Aid approaches" to solving problems. Faculty and staff emphasized that exemplary organizations and programs take a systems approach to food insecurity and homelessness, rather than only offering short-term fixes. One university employee stated, "We have a lot of resources for immediate needs but very few for prevention." Another responded, "So, we're doing the Band-Aid part, but now we've got to back up to the second part where we can identify students before they get to the crisis [stage]." A student similarly used the word "Band-Aid" to describe the university's approach, explaining, "A lot of these are Band-Aids because of institutional-level policies. … But it can be institutional-level change that is required. ... Because all these programs are just filling in the gaps where institutions are failing." Emergency responses, or "Band-Aids," including the campus food pantry, meal scholarship program, and emergency fund, are essential for students in crisis. However, participants prioritized upstream solutions that could address the root causes of basic needs insecurity.

Finally, participants also talked about how exemplary organizations and resources destigmatize seeking help. One staff member explained, "For many of us in this room we've been working on this for a long time. … Now we're a compassionate community that has a few more resources to do something." Students echoed the emphasis on compassion and care, with one student noting that exemplary organizations are "not going to judge you for telling them that you need help." In emphasizing the need for a nonjudgmental approach, participants identified how offering care and support for human dignity is a key element of a justice-oriented approach to addressing food insecurity. Across the workshops, students, faculty, and staff agreed that available resources were addressing some of the existing needs, but argued that there is still work to be done in addressing the structural processes that drive food and housing insecurity, particularly for students from historically oppressed communities.

Strategic Planning: Pulling It All Together

During the final session, students, faculty, and staff suggested ways to reduce and prevent basic needs insecurity among students. They called for the integration of strategies and collaboration be-

tween programs across the university. For example, participants noted that the university needed to do a better job of making students aware of existing resources like the student emergency fund, on-campus food pantry, and meal-swipe programs. They called for improved training for faculty members so that they could better support students in identifying resources. As one faculty member stated, "How can we increase the awareness of these resources? So [our group] went with mandatory—underlined, bold, italicized—training for faculty and staff, including, but not limited to, adding Pack Essentials to every syllabus." This group argued that faculty should talk more openly with students about how to find resources and support and that resources should be consolidated into a "hub" for students so they are easy to find and use.

Participants also discussed how increasing awareness is insufficient. Instead, programs and services need to be fundamentally restructured to better support students, particularly those from historically oppressed communities. For example, one group suggested allocating a set number of free or low-cost rooms in the residence halls. Another noted the need for inclusive housing that supports "the different types of students who may need housing," including students with different family configurations, gender identities, and disabilities. As one student stated:

> [The housing office is saying], "we're keeping housing open for everybody over spring Break" but then still having trans students living in situations that are unsafe. … [University Housing] needs to make sure they're taking into account all nontraditional students, international students. … I think that's a really important thing, because anything less than an intersectional approach will be a Band-Aid.

As noted above, the 2017 survey conducted at NC State found that students who identified as transgender or nonbinary were more likely to have experienced a period of homelessness compared to others in the sample (Haskett, Kotter-Grühn et al., 2020; Haskett et al., 2018). The group noted that universities could counteract this by being responsive to the housing needs of LGBTQ+ students and acknowledging that housing options often require tailored support.

Additionally, several participants noted the unique situation of graduate students, who often have to find and pay for housing before they have the resources to do so (e.g., a first paycheck from an assistantship). They noted, "The university needs to be more proactive about that rather than being like, 'In four to six weeks, you're going to have the money." In short, participants felt that decisions about new housing resources should be student-centered and focused on creating accessible, safe housing that meets the financial needs of all students.

When talking about other necessary changes, participants emphasized the need to move beyond emergency responses (e.g., food pantries), although they acknowledged that these are necessary. Instead, several groups proposed upstream changes like raising wages for student workers and graduate assistants, covering meal plans fully, and keeping residence halls open during winter breaks. Making these types of changes requires funding, time, and collaboration across the university.

As the discussion progressed, the conversation turned to the need for big, structural changes that fall outside the scope of the university. As a graduate student stated, "I think that we really need to focus on the bigger structural changes that need to take place and that includes increasing wages, and not for undergraduates but for graduates as well." Suggestions included increasing student financial aid packages, advocating for increased funding for public education, and ensuring that on-campus and off-campus jobs pay a living wage.

Discussion

In summary, across all workshops, participants expressed the view that NC State is already doing important work to address basic needs insecurity among students. This is particularly true regarding food insecurity; participants cited the on-campus food pantry, meal share program, and student emergency fund as exemplary resources, along with several community resources (e.g., local food pantries, a pay-what-you-can café). Participants gener-

ally felt there were fewer resources available to address housing insecurity, but did list several exemplary resources, including the student emergency fund, University Housing, and the Student Services Center. The fact that there were more resources for food insecurity than housing insecurity is supported in the literature, which has identified similar patterns at other institutions (Broton & Goldrick-Rab, 2018; Hallett & Freas, 2018). It may be easier to respond to food insecurity given that responses can be short-term or one-time and that food costs are considerably lower than housing costs. Universities also need to work with students, faculty, and staff to determine programs and services needed to ensure students have adequate housing, including during semester breaks (Broton & Goldrick-Rab, 2018).

Participants shared that many students were unfamiliar with the resources available to them. They offered a number of suggestions, from creating a physical "basic needs hub" (a centralized place where students could go to access and learn about a wide range of resources) to encouraging or requiring instructors to communicate information about existing resources on their syllabi. Participants also noted that faculty, staff, and students must normalize experiences of food and housing insecurity, in order to encourage students to actually use available resources. Several participants named this as their individual priority, committing to "actively work to destigmatize" basic needs insecurity.

Related to this, our findings reveal that while it is important to recognize and learn from the exemplary resources named by participants, it is perhaps more important to consider the underlying reasons why participants trust and value these resources, as Jakes and colleagues (2015) argue. Our findings offer insight into the priorities and values that colleges and universities should consider as they implement programs and policies to address food and housing insecurity. While recognizing the good work happening, participants repeatedly called on universities to commit to support the education of all students, which requires addressing acute and chronic basic needs insecurities and meeting the unique needs of students from historically marginalized communities (see also Matthews et al., 2019). For example, LGBTQ+ youth experience high rates of housing insecurity, with poverty and family rejection as contributing factors (Robinson, 2018). Simply admitting more students from underrepresented groups is not sufficient; universities have a responsibility to ensure that all students have the resources and support they need to succeed.

Across the workshops, participants agreed that universities should respond quickly and provide direct support (for example, financial assistance), rather than just information or advice. Students emphasized the need for resources that are easy to get to and do not require a lot of paperwork to demonstrate eligibility, echoing other studies of federal food programs that emphasize the importance of access and ease of use (Radcliff et al., 2018; Robbins et al., 2017). Finally, participants also agreed that exemplary resources take an intersectional approach (see also Duran & Núñez, 2021). Echoing research on food assistance programs (Andress & Fitch, 2016; Peterson et al., 2022), participants valued organizations and resources that recognized the interlocking oppressions that shape students' realities and work to build trust and relationships to better support students' basic needs. Some of these exemplary resources were student-led, such as social networks of mutual aid that offered students places to stay when they experienced housing insecurity. As Matthews and colleagues (2019) note, future work should explore informal mutual aid networks as a site of support, to center students' agency in addressing their complex and specific needs related to basic needs security.

We should note that this work has some important limitations. First, although the workshops focused on addressing and preventing food and housing insecurity among NC State students, we did not ask students to identify whether they were food or housing insecure in our background survey. We deliberately chose to do this because we did not want students to feel further stigmatized or harmed by having to name this reality (Peterson et al., 2022). Therefore, we do not know how many food or housing insecure students participated in the workshops, which is a limitation. However, when recruiting, we specifically worked with organ-

izations that serve students who are more likely to experience basic needs insecurity. Moreover, given student responses that highlighted previous experiences of precarity in food and housing insecurity, we believe that we were able to reach and include this population. Additionally, although we conducted extensive recruitment with the campus community centers that support historically marginalized students, the workshops did not include trans or nonbinary students, whose experiences of food and housing insecurity are often compounded by other experiences of stigma and discrimination (Matthews et al., 2019; Robinson, 2018). This is a limitation of our study and an area that needs further research.

As colleges and universities move to address food and housing insecurity among students, methods like asset-mapping workshops can help them think critically about not only the types of services that are offered, but how they are offered. Do the services reflect the values and priorities of the students they serve? Do students feel that service providers are trustworthy and caring? Understanding why students do or do not utilize resources is a vital aspect of creating a campus environment that addresses students' basic needs. Administrators, faculty, and staff should work collaboratively with students to develop initiatives that reflect the values, priorities, and experiences of the students and campus they serve.

This work shows how many of the processes driving food and housing insecurity are out of the control of students and even faculty, staff, and administrators. Universities cannot adequately address the root causes of food insecurity without confronting the inequalities and injustices that shape them. These include rising costs of housing, cuts to public spending on higher education, increases in tuition, and stagnating wages (Bruening et al., 2017; Nazmi et al., 2019). As participants noted during the workshops, the individual actions that people are taking in their classrooms, programs, and social networks are important. However, many of the existing and exemplary initiatives identified in the workshops are what participants called "Band-Aid" solutions to structural problems.

There is no easy fix to addressing food and housing insecurity on college and university campuses, but it is imperative that universities move from responding to downstream crises to addressing the upstream causes of those crises. This is particularly true as universities and colleges continue to confront the broad and long-term impacts of the COVID-19 pandemic. Although these workshops were conducted before the COVID-19 pandemic, the pandemic and the accompanying economic inflation have exacerbated the problems identified here, including rising housing and food costs, as well as social isolation. A February 2021 report from the Pack Essentials Steering Committee identified a "dramatic increase in food insecurity and homelessness" during the pandemic (Haskett & Dorris, 2021, p. 14). The unprecedented food and housing needs of students at NC State and many other universities during the COVID-19 pandemic have exposed and exacerbated inequalities in the U.S. educational system.

NC State, like many universities, continues to struggle to adequately address the root causes of basic needs insecurity. For example, graduate stipends remain far below a living wage, despite efforts by some colleges and programs to increase stipends. Food and housing costs have risen; one analysis estimated that housing costs in Raleigh rose by more than 30% in 2021 alone (Parker, 2022). Campuses that had previously developed resources to address basic needs insecurity, as NC State had, are better equipped to build coalitions that can be activated in the face of crises like the pandemic. However, even these institutions have a long way to go.

Future research should engage students, faculty, and staff at a range of higher education institutions to discuss exemplary assets on their campuses and the reasons these assets are trusted and valued. Engaging with different kinds of institutions and students can provide additional insight into the unique needs and experiences of different types of students (e.g., international students, undocumented students, disabled students, transgender students), as well as the opportunities and resources offered by different types of institutions. Future research on basic needs insecurity should also consider other types of needs (for example, childcare, technology, or transportation).

Conclusions

Preventing food and housing insecurity requires a broad coalition of collaborators with the capacity to act at multiple levels (Freudenberg et al., 2019). For faculty and staff, this could mean integrating support for students experiencing basic needs insecurity into syllabi and teaching. For administrators, it may mean creating safety net programs and paying undergraduate and graduate workers a living wage. For policymakers and key stakeholders, it could mean advocating for policies that approach food and housing insecurity from a systems- and equity-based perspective: raising wages, creating affordable housing, and investing in higher education.

We argue that community-oriented research methods like asset mapping can aid campus communities in adopting an equity- and justice-based approach to food and other forms of basic needs insecurity, by centering the students' voices and experiences and mobilizing campus partners to understand and address the structural roots of these issues. Activities like Graphs Over Time help participants see the long-term trajectories and implications of the issues students face. By reflecting on why certain organizations and programs are valued, participants and campus leaders gained a greater appreciation of the ways that students prioritized resources that took an intersectional, caring approach to service provision. Furthermore, collaborative strategic planning activities can generate strategies for change that build on existing assets and recognize the larger, structural drivers of basic needs insecurity. As participants noted, to have any long-lasting impact, these solutions must move beyond "Band-Aid responses," and instead address the structural and systemic realities that shape the lives and experiences of students who are food and housing insecure.

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