



Basic Needs Insecurity Among Rutgers–New Brunswick Students

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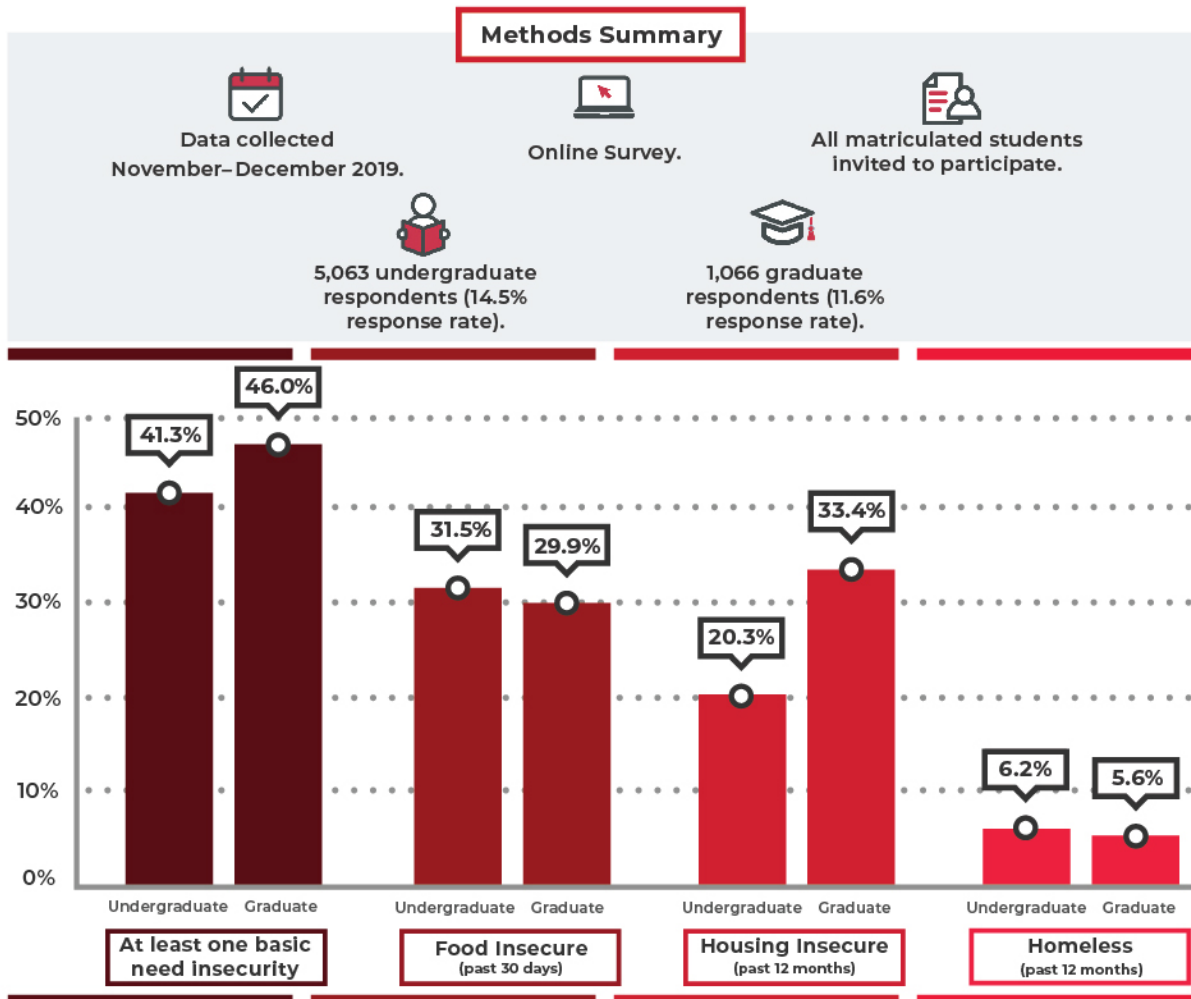
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Summary


Basic Needs Insecurity at Rutgers–New Brunswick




Topline




More than two in five RU–NB students have basic needs insecurity, with 41.3% of undergraduates and 46.0% of graduate students reporting at least one type of insecurity.




Food insecurity is the most common type of basic needs insecurity, with approximately one in three students affected.



Housing insecurity is significantly more common for graduate students (33.4%) than undergraduates (20.3%).



Homelessness is the least common type of basic needs insecurity, with approximately one in 20 students affected.



Among undergraduate students, having a meal plan and living in on-campus housing are related to lower levels of all basic needs insecurities studied.

Foreword

Food insecurity, housing insecurity and homelessness among college students have been a growing problem in higher education in the United States. These have been problems for Rutgers students as well. As educators, we know that if our students' basic needs are not met, they will not be able to meet their full potential—as students or as members of society.

In the years after the recession of 2008, we saw a growing number of Rutgers-New Brunswick students in need of food assistance. Rutgers-New Brunswick began providing assistance informally, through grocery store gift cards distributed by the Dean of Students Office, then, in 2016, formally through the creation of the Rutgers Student Food Pantry. Also in 2016, Dr. Cara Cuite led the first ever study of Rutgers-New Brunswick student food insecurity. From that research, we learned that approximately 1 in 3 Rutgers students had trouble affording food, on par with the average of similar universities around the United States.

In the time since the release of that report, Rutgers-NB has continued and broadened this work. We have expanded the offerings of the Rutgers Student Food Pantry and started food insecurity screening and intervene system in our student health centers. We have targeted philanthropy to address these problems, and as a result we are planning to provide our neediest students with meal plan scholarships. Finally, in 2019, Chancellor Molloy created the Student Essential Needs Task Force.

As the chairs of the Student Essential Needs Task Force, we have spent the last year working to understand better our students' challenges with affording food and housing and exploring solutions to these problems. Our Task Force comprises administrators, staff, and faculty from across the university who work with students in a range of capacities and have a deep understanding of the challenges our students face and how issues of basic needs present in the broader society. Our charge is to examine the issues and barriers that impede students from maximizing their academic and co-curricular pursuits at Rutgers University. These issues include, but are not limited to, having access to food, financial resources, housing, and mental health services.

An important piece of understanding these issues is research. The research reported here helps us to understand the extent of the issues of food insecurity, housing insecurity and homelessness among our students. It also permits us to see how we compare to similar universities around the country. Finally, it suggests solutions that the University can engage in to assist our students in meeting their basic needs.

The research reported here represents a collaboration between faculty, graduate students, and staff from Student Affairs and Institutional Research and Academic Planning. This study expands upon the 2016 study findings and looks beyond the issue of food insecurity to housing insecurity and homelessness.

In sum, Rutgers-New Brunswick has been making strides in addressing these problems. However, there is more work to do. We, along with the Student Essential Needs Task Force and all, are committed to ensuring our students' essential needs are met. The findings in this report will help us with meeting our commitment.

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Co-Chairs of the Chancellor's Task Force on Student Essential Needs

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Introduction

Basic needs, such as food and shelter, must be met for students to fully succeed in higher education. Unfortunately, basic needs insecurity has been documented on college campuses around the nation (Baker-Smith, Coca, Goldrick-Rab, Looker, Richardson, & Williams, 2020; Bruening, Argo, Payne-Sturges, & Laska, 2017; Nazmi et al., 2018). Basic needs insecurity have been demonstrated to have negative psychological effects on students, such as higher rates of anxiety and depression (Martinez, Frongillo, Leung, & Ritchie, 2018; Payne-Sturges, Tjaden, Caldeira, Vincent, & Arria, 2018), as well as poor overall health (Knol, Robb, McKinley, & Wood, 2017; Payne-Sturges et al., 2018). In addition, basic needs insecurity has been linked to lower grade point averages (GPA) (Hagedorn & Olfert, 2018; Martinez et al., 2018), which could result in a decreased likelihood of college completion.

Because basic needs include food and shelter at a minimum, the following constructs are usually included in any measurement of basic needs insecurity. Food insecurity is the limited or uncertain availability of nutritionally adequate and safe food, or the limited or uncertain ability to acquire such food in a socially acceptable manner (USDA, 2019). Housing insecurity includes a broad set of housing challenges that prevent someone from having an adequate, safe, affordable, and consistent place to live (Baker-Smith et al., 2020). Finally, homelessness means that a person does not have a fixed, regular, and adequate place to live (Crutchfield & Maguire, 2017).

These issues have been exacerbated by the health and economic crises resulting from COVID-19, both in the general population (Wolfson & Leung, 2020) and among college students (Hope Center, 2020b). This report describes the findings from a basic needs insecurity survey of students at Rutgers–New Brunswick (RU-NB) conducted in late 2019, before the pandemic was identified in the U.S. It is likely that rates of basic needs insecurity are currently greater than this study indicates.

National and State Context of Basic Needs Insecurity in Higher Education

To understand the findings described in this report, it is important to understand the national and state context. The 2019 administration of the national Hope Center survey, the largest survey of college student basic needs insecurity in the US, included 227 US institutions and had an overall response rate of 8% (Baker-Smith et al., 2020). Within this larger sample were 56 four-year colleges & universities, 85% of which are public. This generated a subsample of 48,618 students at these four-year institutions. Within this group, **33% of students had been food insecure in the prior 30 days, 35% of students had been housing insecure in the prior 12 months, and 16% of students had been homeless in the prior 12 months.** While this is not a representative sample of college students across the country, it is the best available benchmark against which we can compare RU-NB students.

At the State level, the Hope Center conducted the first-ever survey of community colleges in New Jersey, including all but one of the state's 18 community colleges (The Hope Center, 2020a). Nationally, rates of basic needs insecurity are higher at community colleges as compared to four-year institutions. New Jersey community college students experience food and housing insecurity at similar rates as other community college students across the country, though rates of homelessness tend to be lower among these students in NJ. Among NJ community college students, 39% of students were food insecure in the

past 30 days, 44% of students were housing insecure in the past 12 months, and 14% of students were homeless in the past 12 months.

Rutgers–New Brunswick Context

Rutgers University–New Brunswick (RU–NB) has been a leader in addressing student food insecurity. In 2016, RU–NB created the Rutgers Student Food Pantry to begin the process of addressing the needs of our students. Simultaneously, we began to systematically study the prevalence, causes, and consequences of food insecurity among our students, beginning with a campus-wide survey of over 8,000 undergraduate and graduate students. This survey found that 36.9% of our undergraduate students and 32.1% of our graduate students were food insecure (Cuite, Brescia, Porterfield, Weintraub & Willson, 2018), clearly indicating that RU–NB students have a need for increased programming and support services to address this issue.

Over the past four years, RU–NB has created several programs based on best practices at other colleges and universities, such as meal swipe donations and assistance with SNAP enrollment. In addition, RU–NB has created unique and novel programming, including a pilot of a Student Community Café that serves free lunch to students, as well as a food insecurity “screen and intervene” program conducted through Rutgers Student Health. The Rutgers Student Farm grows food specifically for food insecure students, and the RSFP has partnerships with the New Brunswick Community Farmers Market to provide food insecure students no-cost fresh produce.

In addition to addressing food insecurity, RU–NB has programming dedicated to alleviating housing insecurity and homelessness. The Dean of Students Office provides emergency housing for students in crisis, as well as assistance with rent and utility payments through its Emergency Fund¹. However, less work has been done on addressing housing insecurity and homelessness specifically, in part because the university had not yet identified the prevalence of these problems among our students.

Further demonstrating the University’s commitment to addressing these issues, the Chancellor of RU–NB has created the Task Force on Student Essential Needs, charged with better understanding the issues our students face and developing creative solutions. The Task Force will identify strategies to support students experiencing basic needs insecurity and make recommendations about how members of the campus community can best address these issues.

The research described here was conducted to better understand the prevalence of food insecurity, housing insecurity and homelessness among RU–NB students. The study represents the first systematic investigation of housing insecurity and homelessness at RU–NB. In addition, it is the second systematic investigation into food insecurity at RU–NB and will permit limited within-school comparisons on food insecurity over time, as well as a comparison of RU–NB to other universities around the country. Finally, and most importantly, the findings can guide institutional policies and programming to address basic needs insecurities.

¹ <http://studentaffairs.rutgers.edu/support-students/emergency-assistance/#:~:text=Emergency%20Assistance%20Fund,have%20exhausted%20all%20other%20resources.>

Methods

All degree-seeking undergraduate and graduate students enrolled at Rutgers-New Brunswick during the Fall 2019 semester (44,207 in total) were invited to participate in the survey. Four emails (one invitation and three reminders) were sent on behalf of a senior Student Affairs administrator. To increase participation, emails were also sent directly to students from department administrators and college-level deans. The flyer in Figure 1 was shared via email. There was no mention of basic needs insecurity in any recruitment materials to avoid over response from students who experience these hardships. Students who finished the survey were entered into a lottery for the chance to win one of ten \$100 gift cards.

Figure 1. Recruitment flyer sent to all students



Data were collected over a four-week period (11/20/19-12/18/19) using an online Qualtrics survey. The survey took approximately 5-10 minutes to complete. Overall, 6,129 students completed this survey, which includes 5,063 undergraduates (14.5% response rate) and 1,066 graduate students (11.6% response rate). Survey respondents were compared with the general student population to assess sample representativeness. Based on this analysis (see Appendix A), it was determined that the sample was largely representative of the student body.

Food insecurity was measured with the 18-item Household Food Security Survey Module (HFSSM; USDA, 2012), which asks about difficulties affording food. This is a change from our 2016 survey administration, when we used the shorter 10-item version of the same scale. This change was implemented because the Hope Center’s national survey and other large university surveys have moved from the 10-item to the more detailed 18-item in the years since 2016. In addition, we removed “I don’t know” as a possible response option for these questions to be more in line with the national estimates. The full food insecurity scales used in 2016 and 2019 appear in Appendix B.

To maximize our ability to compare the RU-NB data to other universities, we used the housing insecurity and homelessness measures used by Hope Center in their 2019 survey. This included measures of each construct over both a 30-day and 12-month period (see Table 4 for items). Housing insecurity questions tend to focus on the ability to afford safe, stable, and adequate housing while measures of homelessness address a lack of housing.

Student responses were linked to institutional data. Students logged into the survey with their student ID number to verify their eligibility to participate. Upon logging in, students were presented with a consent form that outlined their rights as a research participant and terms related to data linkage and data sharing. By consenting to participate, students agreed to have their survey responses linked to institutional data from their student records. Demographic information included parents’ educational level, military status, gender, citizenship, race/ethnicity, and age. Academic information included school of enrollment, degree level, class level, attendance status, major, and cumulative grade point average (GPA).

Results

Food Insecurity

Food insecurity was calculated using the USDA HFSSM scoring protocol (USDA, 2012). Students with two or fewer affirmative responses are categorized as food secure, while three or more affirmative responses are food insecure. Similar to our 2016 findings, about one in three Rutgers students reported having been food insecure in the 30 days prior to the survey (see Table 1). Undergraduates are slightly more likely to report having been food insecure (31.5%) compared to graduate students (29.9%).

Table 1. Food insecurity in the past 30 days by degree level, 2019.

Undergraduate	Graduate
31.5%	29.9%

The majority of the responses to food insecurity questions are presented in Table 2, broken out by degree level. Questions regarding food insecurity of children in the household are not included in the table. A slightly greater proportion of undergraduates reported experiencing food insecurity than graduate students. The exception to this trend was for agreement with the statement “*I could not afford to eat balanced meals.*”

Table 2. Individual food insecurity survey items over the past 30 days by degree level, 2019.

Undergraduate %		Graduate %
32.3	I worried whether my food would run out before I got money to buy more.	28.5
26.9	The food that I bought just did not last and I did not have money to buy more.	23.1
41.9	I could not afford to eat balanced meals.	42.5
27.3	I cut the size of meals or skipped meals because there was not enough money for food.	23.8
23.3	I cut meals 3 days or more in the past 30 days.*	18.8
24.4	I ate less than I felt I should because there was not enough money for food.	21.3
20.6	I was hungry but didn’t eat because there was not enough money for food.	17.7

Undergraduate %		Graduate %
11.4	I lost weight because there was not enough money for food.	8.6
5.1	I did not eat for a whole day because there was not enough money for food.	3.0
3.6	I did not eat for 3 whole days or more in the past 30 days.*	2.3

*This was asked as a multi-response question and coded as affirmative for 3 or more days.

Housing Insecurity

While food insecurity was measured only at the 30-day interval, we measured housing insecurity for both the “past 30 days” and the “past 12 months.” This allows us to better understand the prevalence of housing insecurity among students both focused on a time period that exclusively includes when classes are in session as well as the longer timeline that includes summer and school holidays, during which many students’ living situations change significantly.

Table 3. Housing insecurity over the past 30 days and 12 months by degree level, 2019.

Past 30 Days	
Undergraduate	Graduate
17.3 %	27.3%
Past 12 Months	
Undergraduate	Graduate
20.3%	33.4 %

Unlike food insecurity where undergraduates had a slightly higher rate, a notably larger proportion of graduate students reported experiencing housing insecurity. This may be related to the fact that the graduate students were older on average and less likely to report being dependent on parents or guardians for housing and managing housing expenses themselves. Graduate students were also more likely to report living with their own children and spouse or partner, which can complicate finding housing.

The exception to this trend was seen for the question “*In the past 12 months, did you leave your household because you felt unsafe?*” This result indicates that, although undergraduates may be less

vulnerable to financial difficulties related to housing, they may be slightly more affected by housing infrastructure or dynamics.

Table 4. Individual housing insecurity measures over the past 12 months by degree level, 2019.

Undergrad. %	In the past 12 months...	Grad. %
20.3	Yes to any item below (can check multiple)	33.4
10.4	...was there a rent or mortgage increase that made it difficult to pay?	19.5
4.6	...did you not pay or underpay your rent or mortgage?	7.6
6.5	...did you not pay the full amount of a gas, oil, or electricity bill?	9.8
3.1	...have you moved three times or more?	4.2
3.7	...did you move in with other people, even for a little while, because of financial problems?	7.4
4.9	...did you live with others beyond the expected capacity of the house or apartment?	6
0.9	...have you received a summons to appear in housing court?	1.2
3.1	...did you have an account default or go into collections?	7.7
3.8	...did you leave your household because you felt unsafe?	2.9

Homelessness

Homelessness affects a small but significant percentage of RU-NB students. Not surprisingly, more homelessness is reported over the 12-month interval than 30-day interval, as seen in Table 5 below, a pattern we also see for housing insecurity. Because this is an indicator of a more severe condition, it is not surprising that there are lower levels of homelessness than housing insecurity for all students. Whereas graduate students had significantly higher rates of housing insecurity, we see similar rates of homelessness for both undergraduate and graduate students.

Table 5. Homelessness over the past 30 days and 12 months by degree level, 2019.

Past 30 Days	
Undergraduate	Graduate
3.5%	2.4%
Past 12 Months	
Undergraduate	Graduate
6.2%	5.6%

Looking at the individual measures that make up the homelessness scale presented in Table 6, we see that only 1.0% of undergraduates and 1.2% of graduate students *self-identify* as homeless. However, when calculating the percentage of students who endorsed one or more individual indicators of homelessness, the rates are 6.2% and 5.6%, respectively. The most common indicator of homelessness for students across degree levels was temporarily staying with a relative or friend, colloquially known as couch-surfing.

Table 6. Individual homelessness measures over the past 12 months by degree level, 2019.

Undergraduates %	12 months	Graduate Students %
6.2	Yes to any item below (can check multiple)	5.6
1.0	In the past 12 months, have you ever been homeless?	1.2
	In the past 12 months, have you slept in any of the following places?	
0.1	At a shelter	0.0
0.4	In a camper	0.2
2.9	Temporarily staying with a relative, friend, or couch surfing until I find other housing	3.8
0.6	Temporarily at a hotel or motel without a permanent home to return to (not on vacation or business travel)	1.0
0.3	In transitional housing or independent living program	0.3

Undergraduates %	12 months	Graduate Students %
0.1	At a group home such as halfway house or residential program for mental health or substance abuse	0.0
0.6	At a treatment center (such as detox, hospital, etc.)	0.1
0.9	Outdoor location (such as street, sidewalk, or alley; bus or train stop; campground or woods; park, beach, or riverbed; under bridge or overpass; or other)	0.7

Meal Plans and On-campus Residence

Not having a meal plan and not living on campus are both significantly associated with basic needs insecurity among our undergraduate students. Table 7 presents the percentage of undergraduate students within each meal plan or residence category that has the three types of basic needs insecurity measured here. We did not include graduate students here as very few have meal plans, and they are much less likely to live on campus.

Across all types of basic needs insecurity, having access to university resources is protective. Students with meal plans are less likely to be food insecure, but also less likely to be housing insecure and homeless in the prior 12 months. This could reflect the fact that students who live on campus are more likely to have a meal plan than those who do not (85.1% vs.8.4%). It likely also reflects that students who have limited financial resources often cannot afford to live on campus or have a meal plan.

Table 7. Basic needs insecurity by meal plan and housing status among undergraduates, 2019.

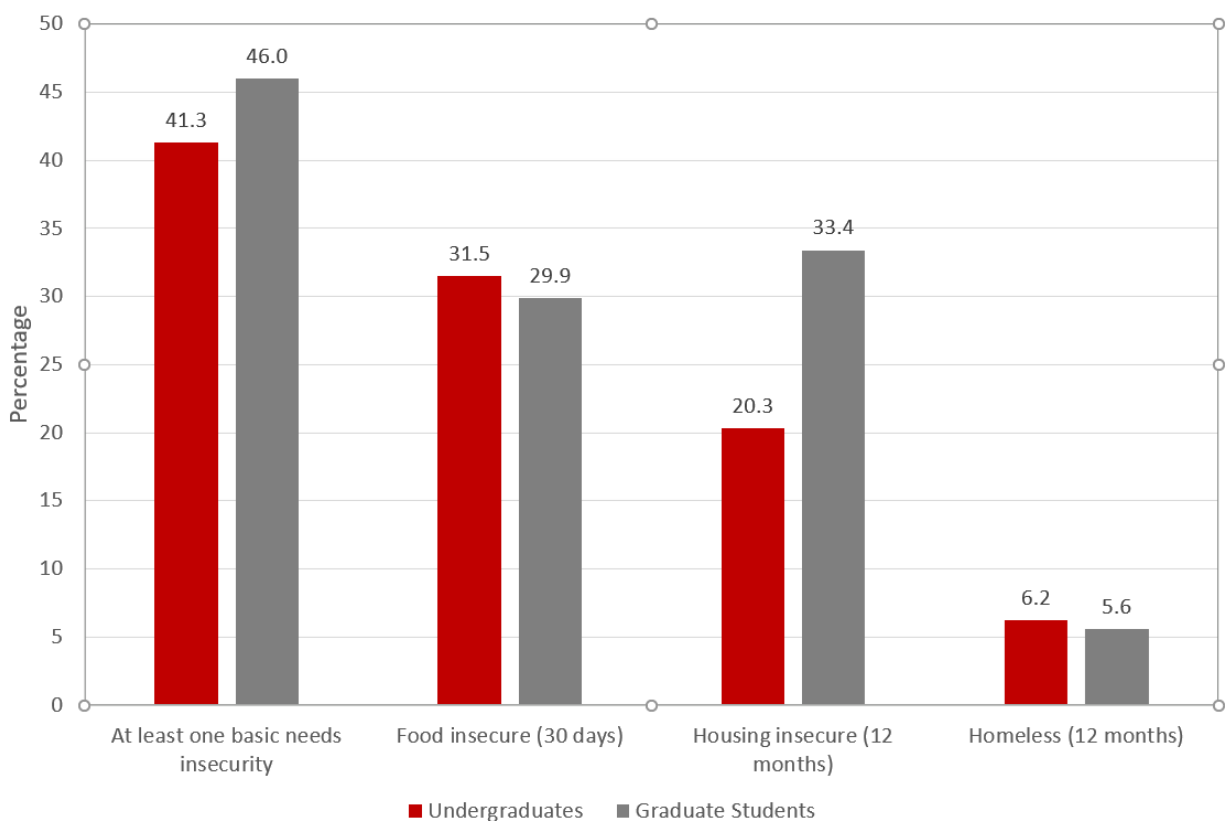
	Meal plan status		Housing status	
	With meal plan (n = 2,753) %	Without meal plan (n = 2,300) %	On campus (n = 2,550) %	Not on campus (n = 2,000) %
Food insecure in past 30 days	23.7	40.9	23.6	39.4
Housing insecure in past 12 months	12.8	29.2	12.0	30.8
Homeless in past 12 months	5.9	6.5	5.8	6.7

Overlapping Basic Needs Insecurities

To explore how many students have at least one basic needs insecurity, we analyzed only those students who completed the food and housing insecurity as well as the homelessness scales (undergraduates, n=4,315 and graduate students n = 935). We find that 41.3% of undergraduates and 46.0% of graduate

students have at least one basic needs insecurity. Thus, 58.7% of our undergraduates and 54.0% of our graduate students have no basic needs insecurity. This is displayed in Figure 2, and the bars for each level do not sum to 100% because many students have more than one basic needs insecurity.

Figure 2. Basic needs insecurity by degree level, 2019.



Discussion

Overall, this study shows that in late 2019, prior to the COVID-19 pandemic, over 4 in 10 RU-NB students had at least *one* basic needs insecurity. More specifically, 1 in 3 RU-NB undergraduates reported being food insecure over the past 30 days, 1 in 5 reported being housing insecure in the past year, and 1 in 20 undergraduates reported being homeless in the past year. These numbers are slightly different for graduate students, who are at higher risk for housing insecurity than undergraduates. Overall, just over half RU-NB students have no basic needs insecurity at all, while almost as many have at least one.

No study is perfect, and this one is no exception. The survey is vulnerable to sampling bias. We did not mention food or housing in survey recruitment materials, but rather advertised as a “quality of life” survey, to avoid oversampling students with basic needs insecurity. However, the lottery for \$100 incentives could have counteracted that and resulted in oversampling of lower income and/or basic needs insecure students. In addition, we know that students who struggle to meet their basic needs

have limited time due to work and other responsibilities, making it less likely that they are able to complete an online survey and resulting in the potential of undersampling students most at risk for basic needs insecurity. Keeping these potential limitations in mind, our analysis shows that we did reach a significant and largely representative segment of the student body.

Food Insecurity

While we see a lower rate of food insecurity in 2019 than we did in 2016, it is not possible to use these data to say that the rate of student food insecurity at Rutgers has decreased significantly. This is because we used both different recruiting strategies and slightly different measurement tools as a result of changes in best practices in studying this issue. However, there is evidence that food insecurity is being better addressed at RU-NB from an institutional perspective. Many more students are aware of the Rutgers Student Food Pantry (20.1% in 2016 vs. 66.1% in 2019) and more students report using the pantry than in 2016 (0.3% in 2016 vs. 3.1% in 2019). This matches data from the Rutgers Student Food Pantry, which show the rate of use has increased significantly during the same time period. This is likely because of increased outreach over the past few years, including introducing the pantry during New Student Orientation.

Figure 3. Rutgers New Student Orientation.



Note: New Student Orientation provides information about the Rutgers Student Food Pantry. Students also pack food bags for local elementary school students.

During this period, there have been increased efforts made by the university to address the issue of food insecurity. These include expanding the meal plan donation program, where students can donate unused meal swipes to be used by other students. In addition, a team at RU-NB has conducted a pilot test of a free lunch program in partnership with a local food pantry and implemented a food insecurity “screen and intervene” program through Rutgers Student Health in 2018. While classes have been remote, the Rutgers Student Food Pantry has continued to serve those students who have remained on campus as well as those off-campus students that live close enough to use it.

Housing Insecurity and Homelessness

This study represents RU-NB’s first systematic investigation of housing insecurity and homelessness among its students. As expected, when asked about at a 12-month time horizon compared to a shorter 30-day horizon, more students report struggling with these issues. This may reflect the fact that summers and school vacations are included in the longer time frame, when most students are not housed on campus and many leave the New Brunswick area.

Housing insecurity is more common than homelessness, which is to be expected given the greater severity of homelessness. This is particularly true for graduate students, who are significantly more likely to report having been housing insecure than undergraduate students. As noted above, this is likely because graduate students tend to be older and less likely to rely on parental or other family resources.

Consistent with the national data on student housing insecurity (Baker-Smith et al., 2020), many students who are identified as homeless based on the measurement tool used here do not identify themselves as homeless. Students who are “couchsurfing” or temporarily staying with friends or relatives generally do not consider themselves homeless even though they meet the criteria used in our measurement tool. Individuals who do not have a home of their own but who have a place to sleep are often referred to as “sheltered homeless” (Hope Center, 2020b).

Future Research and Programming

There is much to be done in terms of *future research*, including many analyses to be explored with the existing data set. The current survey included a range of questions about stigma, employment and financial factors, and participation in assistance programs. We also have longitudinal data for approximately 500 students that completed both the 2016 and 2019 survey.

Based on recommendations from the Student Essential Needs Task Force, future surveys should explore additional needs, such as transportation, mental health, and access to technology. We also have the opportunity to study basic needs insecurity in other regularly administered surveys of our students, such as the Student Experience in the Research University (SERU) and the National College Health Assessment surveys. This would permit an examination of connections between basic needs on other outcomes and topics under study, such as identity, mental health, and violence.

Finally, we want to better understand how COVID-19 affects basic needs insecurity among our students. We are planning to explore this further, using data from the Student Experience at the Research University survey of RU-NB students, which was conducted during the pandemic, as well as an upcoming survey of Rutgers Student Food Pantry users.

In terms of *future programming*, leadership at RU-NB plans to continue with successful programs, including the Rutgers Student Food Pantry collaborations with fresh produce providers and the “screen and intervene” program run by Rutgers Student Health. There are plans to expand the free student lunch program once all students are back on campus. Finally, the Rutgers Student Food Pantry has begun the process of exploring satellite and mobile food pantries to serve the large number of students that are spread out over the five smaller campuses that comprise RU-NB.

More work is needed to understand and compile the resources available to support housing insecurity and homeless students. This will include a work by Residence Life to find and adapt community resources and procedures to support students, including housing offerings, financial support, and more. Connecting students to federal and state housing support is something that could be explored further.

Off-Campus Living and Community Partnerships, which runs the Rutgers Student Food Pantry, is developing a Food and Housing Insecurity Toolkit to be used throughout RU-NB. One of the primary goals of the toolkit is to provide practical tools and resources for students, faculty and staff to refer students to the appropriate resources on campus. However, this toolkit aims to extend beyond simply providing contact information for resources. It will include information about how to recognize signs of basic needs insecurity and strategies for discussing the topic with students. Recognizing that students tend to reach out to peers for support and assistance first, we also will provide guidance for how students can address these issues in conversation with their friends and suggest language for peer referrals. Stigma and sensitivity around discussing issues of food and housing insecurity are common (El Zein, Mathews, House, Shelnutt; 2018), so it is important that the community work together to normalize help-seeking behaviors.

COVID-19 and Basic Needs Insecurities

The basic needs insecurity landscape for our students has surely changed as a result of COVID-19, as it has for students around the country (Hope Center, 2020b) and for Americans more generally (Feeding America, 2020; Wolfson & Leung, 2020). Although these survey data were collected in December 2019, they highlight vulnerabilities in the student population that may be affected by the COVID-19 pandemic and the associated economic downturn.

These findings point to vulnerable students who might be particularly affected by the pandemic. Most students who experience homelessness report staying with a relative or friend, but social distancing measures may make this option less viable. It also highlights that students who are homeless often do not self-identify as such. When RU-NB tries to identify students who need to be housed on-campus, simply asking if a student is homeless may not be sufficient. Finally, stressors from illness or unemployment that many students are likely experiencing may exacerbate student basic needs insecurities (McCarthy, 2020).

Potential changes to federal and state nutrition and housing assistance programs, such as SNAP, and mortgage or rent forgiveness programs may help ease these burdens for student populations (State of New Jersey, 2020). In the absence of such systematic changes, colleges and universities are left to determine the best way to allocate often-limited resources to address basic needs insecurity within their student population. As this report highlights the prevalence of basic needs insecurity at RU-NB, it can

help university leadership make decisions about emergency assistance and appropriate allocation of university resources such as on-campus residences and dining halls.

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Appendix A Representativeness Analysis

Fall 2019 Basic Needs Insecurity Survey Representation

	Total N	Percent	Response N	Response Rate	Change	Expected Sample Value	Difference (Expected - Observed)	Difference ² / Expected	Chi-Square Value	p-value	Cramers V (.10 = small effect, .30 = medium effect, and .50 = large effect)
TOTAL	44,207		6,129	13.9%							
Citizenship									37.89	0.00	0.03
US Citizen	36,104	81.7%	5,192	14.4%	0.5%	5006	-186	6.94			
Permanent Resident	2,427	5.5%	282	11.6%	-2.2%	336	54	8.82			
Foreign National	5,676	12.8%	655	11.5%	-2.3%	787	132	22.12			
Class Level: Total									357.34	0.00	0.09
First Year	7,719	17.5%	1,561	20.2%	6.4%	1070	-491	225.10			
Sophomore	8,007	18.1%	1,239	15.5%	1.6%	1110	-129	14.96			
Junior	8,388	19.0%	1,100	13.1%	-0.8%	1163	63	3.41			

	Total N	Percent	Response N	Response Rate	Change	Expected Sample Value	Difference (Expected - Observed)	Difference ² / Expected	Chi-Square Value	p-value	Cramers V (.10 = small effect, .30 = medium effect, and .50 = large effect)
Senior	10,866	24.6%	1,163	10.7%	-3.2%	1506	343	78.32			
Graduate	9,227	20.9%	1,066	11.6%	-2.3%	1279	213	35.55			
Gender									418.30	0.00	0.10
Female	22,900	51.8%	3,975	17.4%	3.5%	3175	-800	201.61			
Male	21,307	48.2%	2,154	10.1%	-3.8%	2954	800	216.69			
Degree Level									44.93	0.00	0.03
Undergraduate	34,980	79.1%	5,063	14.5%	0.6%	4850	-213	9.38			
Graduate or 1st Professional	9,227	20.9%	1,066	11.6%	-2.3%	1279	213	35.55			
School									144.75	0.00	0.06
EJB School of Planning and Public Policy (UG)	264	0.6%	39	14.8%	0.9%	37	-2	0.16			

	Total N	Percent	Response N	Response Rate	Change	Expected Sample Value	Difference (Expected - Observed)	Difference ² / Expected	Chi-Square Value	p-value	Cramers V (.10 = small effect, .30 = medium effect, and .50 = large effect)
EJB School of Planning and Public Policy (G)	361	0.8%	55	15.2%	1.4%	50	-5	0.49			
Ernest Mario School of Pharmacy (G)	403	0.9%	29	7.2%	-6.7%	56	27	12.93			
Ernest Mario School of Pharmacy (UG)	891	2.0%	144	16.2%	2.3%	124	-20	3.39			
Graduate School of Applied & Professional Psych	256	0.6%	31	12.1%	-1.8%	35	4	0.57			
Graduate School of Education	1,005	2.3%	81	8.1%	-5.8%	139	58	24.42			
Mason Gross School of the Arts (G)	260	0.6%	14	5.4%	-8.5%	36	22	13.48			
Mason Gross School of the Arts (UG)	856	1.9%	103	12.0%	-1.8%	119	16	2.07			
Rutgers Business	4,633	10.5%	768	16.6%	2.7%	642	-126	24.59			

	Total N	Percent	Response N	Response Rate	Change	Expected Sample Value	Difference (Expected - Observed)	Difference ² / Expected	Chi-Square Value	p-value	Cramers V (.10 = small effect, .30 = medium effect, and .50 = large effect)
School - New Brunswick (UG)											
School of Nursing (UG)	402	0.9%	64	15.9%	2.1%	56	-8	1.23			
School of Arts and Sciences	20,407	46.2%	2,832	13.9%	0.0%	2829	-3	0.00			
School of Communication & Information (G)	661	1.5%	61	9.2%	-4.6%	92	31	10.25			
School of Engineering	3,997	9.0%	535	13.4%	-0.5%	554	19	0.66			
School of Environmental and Biological Sciences	3,222	7.3%	558	17.3%	3.5%	447	-111	27.73			
School of Management and Labor Relations (G)	279	0.6%	26	9.3%	-4.5%	39	13	4.16			
School of Management and Labor Relations (UG)	308	0.7%	20	6.5%	-7.4%	43	23	12.07			
School of Social Work	1,745	3.9%	241	13.8%	-0.1%	242	1	0.00			

	Total N	Percent	Response N	Response Rate	Change	Expected Sample Value	Difference (Expected - Observed)	Difference ² / Expected	Chi-Square Value	p-value	Cramers V (.10 = small effect, .30 = medium effect, and .50 = large effect)
School of Graduate Studies (Legacy GSNB students)	4,257	9.6%	528	12.4%	-1.5%	590	62	6.56			
Full Time/ Part Time									182.43	0.00	0.06
Full Time	38,417	86.9%	5,683	14.8%	0.9%	5326	-357	23.89			
Part Time	5,790	13.1%	446	7.7%	-6.2%	803	357	158.54			
Race/Ethnicity									16.87	0.00	0.02
African American	3,043	6.9%	367	12.1%	-1.8%	422	55	7.14			
Asian	16,080	36.4%	2181	13.6%	-0.3%	2229	48	1.05			
Hispanic	5,621	12.7%	765	13.6%	-0.3%	779	14	0.26			
White	16,978	38.4%	2425	14.3%	0.4%	2354	-71	2.15			
Other (includes American Indian, Other, Two or More and Unknown)	2,485	5.6%	391	15.7%	1.9%	345	-46	6.27			

Appendix B 10-item and 18-item US Household Food Insecurity Survey Module

For more information on design and scoring of these scales, see <https://www.ers.usda.gov/topics/food-nutrition-assistance/food-security-in-the-us/survey-tools/>.

10-Item HFSSM Used in 2016 Survey Administration

Thinking about the last 30 days, how true would you say the following statements are?

Q1 I was worried whether my food would run out before I had money to buy more.

- Often True (1)
 - Sometimes True (2)
 - Never True (3)
 - I don't know (4)
-

Q2 The food that I bought just didn't last, and I didn't have money to get more.

- Often True (1)
 - Sometimes True (2)
 - Never True (3)
 - I don't know (4)
-

Q3 I couldn't afford to eat balanced meals.

- Often True (1)
 - Sometimes True (2)
 - Never True (3)
 - I don't know (4)
-

Display This Question:

If I was worried whether my food would run out before I had money to buy more. Never True Is Not Selected

Or The food that I bought just didn't last, and I didn't have money to get more. Never True Is Not Selected

Or I couldn't afford to eat balanced meals. Never True Is Not Selected

Q4 In the last 30 days, did you ever cut the size of your meals or skip meals because there wasn't enough money for food?

- Yes (1)
- No (2)
- I don't know (3)

Display This Question:

If In the last 30 days, did you ever cut the size of your meals or skip meals because there wasn't enough money for food? Yes Is Selected

Q5 How many of the last 30 days did you cut the size of your meals or skip meals because there wasn't enough money for food?

[OPEN]

Display This Question:

If I was worried whether my food would run out before I had money to buy more. Never True Is Not Selected

Or The food that I bought just didn't last, and I didn't have money to get more. Never True Is Not Selected

Or I couldn't afford to eat balanced meals. Never True Is Not Selected

Q6 In the last 30 days, did you ever eat less than you felt you should because there wasn't enough money for food?

- Yes (1)
- No (2)
- I don't know (3)

Display This Question:

If I was worried whether my food would run out before I had money to buy more. Never True Is Not Selected

Or The food that I bought just didn't last, and I didn't have money to get more. Never True Is Not Selected

Or I couldn't afford to eat balanced meals. Never True Is Not Selected

Q7 In the last 30 days, were you ever hungry but didn't eat because there wasn't enough money for food?

- Yes (1)
- No (2)
- I don't know (3)
-

Display This Question:

If I was worried whether my food would run out before I had money to buy more. Never True Is Not Selected

Or I couldn't afford to eat balanced meals. Never True Is Not Selected

Or The food that I bought just didn't last, and I didn't have money to get more. Never True Is Not Selected

Q8 In the last 30 days, did you lose weight because there wasn't enough money for food?

- Yes (1)
- No (2)
- I don't know (3)
-

Display This Question:

If I was worried whether my food would run out before I had money to buy more. Never True Is Not Selected

Or The food that I bought just didn't last, and I didn't have money to get more. Never True Is Not Selected

Or I couldn't afford to eat balanced meals. Never True Is Not Selected

Q9 In the last 30 days, did you ever not eat for a whole day because there wasn't enough money for food?

- Yes (1)
- No (2)

I don't know (3)

Display This Question:

*If In the last 30 days, did you ever not eat for a whole day because there wasn't enough money for food?
Yes Is Selected*

Q10 For how many of the last 30 days did you not eat for a whole day because there wasn't enough money for food?

[OPEN]

18-Item HFSSM Used in 2019 Survey Administration

Please indicate how often the following statements are true for you.

Q1 “I worried whether my food would run out before I got money to buy more.”

Was that often true, sometimes true, or never true for you in the last 30 days?

- Often true (1)
- Sometimes true (2)
- Never true (3)
-

Q2 “The food that I bought just didn’t last, and I didn’t have money to get more.”

Was that often, sometimes, or never true for you in the last 30 days?

- Often true (1)
- Sometimes true (2)
- Never true (3)
-

Q3 “I couldn’t afford to eat balanced meals.”

Was that often, sometimes, or never true for you in the last 30 days?

- Often true (1)
- Sometimes true (2)
- Never true (3)

End of Block: HFSS ADULT Stage 1

HFSS ADULT STAGE 2

Display Logic: if any of first three responses are “often” or “sometimes true.”

Q4 In the last 30 days, did you ever cut the size of your meals or skip meals because there wasn’t enough money for food?

- Yes (1)
- No (2)
-

Display Logic: If response to prior question was “Yes”

Q5 In the last 30 days, how many days did this happen?

Options: 1 -30

Display Logic: if any of first three responses are "often" or "sometimes true."

Q6 In the last 30 days, did you ever eat less than you felt you should because there wasn't enough money for food?

Yes (1)

No (2)

Display Logic: if any of first three responses are "often" or "sometimes true."

Q7 In the last 30 days, were you ever hungry but didn't eat because there wasn't enough money for food?

Yes (1)

No (2)

Display Logic: if any of first three responses are "often" or "sometimes true."

Q8 In the last 30 days, did you lose weight because there wasn't enough money for food?

Yes (1)

No (2)

HFSS ADULT STAGE 3

Display This Question:

If In the last 30 days, did you ever cut the size of your meals or skip meals because there wasn't e... = Yes

Or In the last 30 days, did you ever eat less than you felt you should because there wasn't enough m... = Yes

Or In the last 30 days, were you ever hungry but didn't eat because there wasn't enough money for fo... = Yes

Or In the last 30 days, did you lose weight because there wasn't enough money for food? = Yes

Q9 In the last 30 days, did you ever not eat for a whole day because there wasn't enough money for food?

Yes (1)

No (2)

Display Logic: If response to prior question is “yes.”

Q10 In the last 30 days, how many days did this happen?

[Options 1–30]

Display logic: Display if they have any biological, adopted, step or foster children who live in your household.

Please indicate how often the following statements are true for you.

Q11 “I relied on only a few kinds of low-cost food to feed my children because I was running out of money to buy food.”

Was that often, sometimes, or never true for you in the last 30 days?

Often true (1)

Sometimes true (2)

Never true (3)

Q12 “I couldn’t feed my children a balanced meal, because I couldn’t afford that.”

Was that often, sometimes, or never true for you in the last 30 days?

Often true (1)

Sometimes true (2)

Never true (3)

Q13 “My child was not eating enough because I just couldn’t afford enough food.”

Was that often, sometimes, or never true for you in the last 30 days?

Often true (1)

Sometimes true (2)

Never true (3)

Display This Question:

If “I relied on only a few kinds of low-cost food to feed my children because I was running out of... = Often true

Or “I relied on only a few kinds of low-cost food to feed my children because I was running out of...” = Sometimes true

Or “I couldn’t feed my children a balanced meal, because I couldn’t afford that.” Was that often, s... = Often true

Or “I couldn’t feed my children a balanced meal, because I couldn’t afford that.” Was that often, s... = Sometimes true

Or “My child was not eating enough because I just couldn’t afford enough food.” Was that often, som... = Often true

Or “My child was not eating enough because I just couldn’t afford enough food.” Was that often, som... = Sometimes true

Q14 In the last 30 days, did you ever cut the size of your children’s meals because there wasn’t enough money for food?

Yes (1)

No (2)

Display This Question:

If “I relied on only a few kinds of low-cost food to feed my children because I was running out of...” = Often true

Or “I relied on only a few kinds of low-cost food to feed my children because I was running out of...” = Sometimes true

Or “I couldn’t feed my children a balanced meal, because I couldn’t afford that.” Was that often, s... = Often true

Or “I couldn’t feed my children a balanced meal, because I couldn’t afford that.” Was that often, s... = Sometimes true

Or “I couldn’t feed my children a balanced meal, because I couldn’t afford that.” Was that often, s... = Often true

Or “I couldn’t feed my children a balanced meal, because I couldn’t afford that.” Was that often, s... = Sometimes true

Q15 In the last 30 days, did your children ever skip meals because there wasn’t enough money for food?

Yes (1)

No (2)

Display This Question:

*If In the last 30 days, did your children ever skip meals because there wasn't enough money for food? =
Yes*

Q16 In the last 30 days, how many days did this happen?

[Response options 1–30]

Display This Question:

If "I relied on only a few kinds of low-cost food to feed my children because I was running out of... = Often true

Or "I relied on only a few kinds of low-cost food to feed my children because I was running out of... = Sometimes true

Or "I couldn't feed my children a balanced meal, because I couldn't afford that." Was that often, s... = Often true

Or "I couldn't feed my children a balanced meal, because I couldn't afford that." Was that often, s... = Sometimes true

Or "My child was not eating enough because I just couldn't afford enough food." Was that often, som... = Often true

Or "My child was not eating enough because I just couldn't afford enough food." Was that often, som... = Sometimes true

Q17 In the last 30 days, were your children ever hungry but you just couldn't afford more food?

Yes (1)

No (2)

Display This Question:

If "I relied on only a few kinds of low-cost food to feed my children because I was running out of... = Often true

Or "I relied on only a few kinds of low-cost food to feed my children because I was running out of... = Sometimes true

Or "I couldn't feed my children a balanced meal, because I couldn't afford that." Was that often, s... = Often true

Or "I couldn't feed my children a balanced meal, because I couldn't afford that." Was that often, s... = Sometimes true

Or “My child was not eating enough because I just couldn’t afford enough food.” Was that often, som... = Often true

Or “My child was not eating enough because I just couldn’t afford enough food.” Was that often, som... = Sometimes true

Q18 In the last 30 days, did any of your children ever not eat for a whole day because there wasn’t enough money for food?

Yes (1)

No (2)