

Oregon Health & Science University
School of Medicine

Scholarly Projects Final Report

Title (Must match poster title; include key words in the title to improve electronic search capabilities.)

OHSU's Food Resource Center: Analyzing the quantitative and qualitative impact of an on-campus food resource for students

Student Investigator's Name

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Date of Submission (mm/dd/yyyy)

March 20, 2022

Graduation Year

2022

Project Course (Indicate whether the project was conducted in the Scholarly Projects Curriculum; Physician Scientist Experience; Combined Degree Program [MD/MPH, MD/PhD]; or other course.)

Scholarly Projects Curriculum

Co-Investigators (Names, departments; institution if not OHSU)

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Project/Research Question

- What benefit is the FRC providing, if any?
- Who is using OHSU's Food Resource Center (FRC) and how are they using it?
- What components of the FRC are most beneficial and how can they be sustainably continued?
- Who is not using the FRC and what barriers prevent them from doing so?

Type of Project (Best description of your project; e.g., research study, quality improvement project, engineering project, etc.)

Research Study – survey and quality improvement

Key words (4-10 words describing key aspects of your project)

Student food insecurity, food pantry, benefits, barriers

Meeting Presentations

If your project was presented at a meeting besides the OHSU Capstone, please provide the meeting(s) name, location, date, and presentation format below (poster vs. podium presentation or other).

n/a

Publications (Abstract, article, other)

If your project was published, please provide reference(s) below in JAMA style.

Egan M. Oregon Health & Science University (OHSU) Student Meal-in-a-Bag Project. Presented at UFWH Conference: March 25, 2021.
Egan M. OHSU's Food Resource Center: Analyzing the quantitative and qualitative impact of an on-campus food resource for students. Presented at OAFP Conference: April 9, 2022.

Submission to Archive

Final reports will be archived in a central library to benefit other students and colleagues. Describe any restrictions below (e.g., hold until the publication of article on a specific date).

None

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Next Steps

What are possible next steps that would build upon the results of this project? Could any data or tools resulting from the project have the potential to be used to answer new research questions by future medical students?

Future directions could include: a more structured evaluation of the FRC's impact on student food insecurity by asking students about their perceived pre- and post-use impressions of food insecurity. We are also interested in using these results to improve the ways the FRC serves students by reducing barriers to use and providing services that students indicated they felt were or would be valuable. Finally, we hope to expand the services offered beyond food to include other basic needs like housing, emergency funds, school supplies, household items, and more.

Please follow the link below and complete the archival process for your Project in addition to submitting your final report.

https://ohsu.ca1.qualtrics.com/jfe/form/SV_3Is2z8V0goKiHZP

Student's Signature/Date (Electronic signatures on this form are acceptable.)

This report describes work that I conducted in the Scholarly Projects Curriculum or alternative academic program at the OHSU School of Medicine. By typing my signature below, I attest to its authenticity and originality and agree to submit it to the Archive.

X

Student's full name

Mentor's Approval (Signature/date)

March 18, 2020

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Report: Information in the report should be consistent with the poster, but could include additional material. Insert text in the following sections targeting 1500-3000 words overall; include key figures and tables. Use Calibri 11-point font, single-spaced and 1-inch margin; follow JAMA style conventions as detailed in the full instructions.

Introduction

OHSU's Food Insecurity Taskforce (FIT) was founded in 2017 to address student food insecurity on campus, which has been consistently described as a significant contributor to negative physical, mental, and academic outcomes¹⁻⁵. A survey conducted by the FIT in 2018 estimated that approximately 25% of OHSU students self-reported food insecurity. Students reported experiencing food insecurity due to financial burden, lack of time to prepare food, and geographic barriers to food access.⁶ The OHSU data is consistent with other surveys of undergraduate and graduate health professional students (GPHS), which report food insecurity of 11.8-42%^{2,7-11}.

To address food insecurity among GPHS at OHSU, a program offering grocery staples was created in May 2020. By December 2020, this program evolved into the Food Resource Center (FRC), which offers a variety of food items at no cost to students, regardless of financial need, through shopping hours, food delivery, and orders for on-site pick-up. The FRC established partnerships with the Oregon Food Bank, OHSU Food and Nutrition Services, and other community partners to source foods for distribution. At the time of completion of the survey, in January 2022, the FRC had served over 900 individual students through nearly 3,200 encounters. As the program evolved, it offered a greater number of services to participants. Given the limited financial resources available to support the FRC and the requests to expand services, we need to understand which services are most strongly associated with reductions in student food insecurity and are most valued by students.

Although food pantries similar to the FRC are common on college campuses, limited data is available about how access to these programs impact food security. Despite increased use of the FRC by GPHS at OHSU, we know that the program likely is not serving all food-insecure students. In academic year 2022, OHSU student enrollment in Portland-based programs was estimated to be 3,035 students¹². If rates of food insecurity among students remained stable since 2018, approximately 759 students would experience food insecurity.⁶ Based on our utilization statistics, we are not reaching all students experiencing food insecurity. This estimate presumes all students currently using the FRC experience food insecurity. While this is a reasonable assumption, the FRC does not assess "financial means" or other criteria to qualify or disqualify students from using its services. Surveys of students at other institutions reveal barriers to food pantry utilization include social stigma, lack of information about the existence or location of campus food pantries, unclear or inconvenient hours, and perception that others need the resource more.¹³⁻¹⁷ We do not know what barriers students at OHSU face in using the FRC.

The purpose of this study is to elucidate the impacts of the FRC on student food insecurity and to determine barriers to the use of this resource by collecting qualitative and quantitative data through a voluntary, anonymous survey. By gathering and interpreting this data, we also hope to guide future directions of the Food Resource Center (FRC) as it nears its second anniversary.

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Methods

SURVEY DESIGN

A survey was designed using a combination of items from previous questionnaires that assessed food security status of students at OHSU, and items in the validated USDA 6-item Short Form Food Security Survey Module and the USDA 2 Item Food Insecurity Screen. Items that assessed demographic characteristics, FRC utilization, and barriers to use were also included. This survey was deployed through Qualtrics and data was stored securely in Box, then in OneDrive, starting on January 1, 2022.

PARTICIPANT SELECTION AND RECRUITMENT

All OHSU students were eligible to participate in this study. Students volunteered to participate in this study by completing the anonymous survey. Recruitment was done in collaboration with the OHSU Student Health and Wellness Program and the Food Resource Center that promoted the survey and shared the link to the survey through targeted messaging to students. OHSU Strategic Communications, through posts in the *OHSU Now* electronic newsletter, shared the survey link and promoted participation in the survey in two separate updates deployed 1 month apart. Recruitment announcements that included the link to the survey were sent to graduate program directors by email to share with their students. Recruitment announcements that included the survey link were sent directly to medical students through a listserv.

FRC DATA COLLECTION

Student use of the FRC was tracked via an electronic Qualtrics survey or hand-written sign-out sheets completed when students attended shopping hours. Information collected included program of enrollment and email address which was counted to determine the total number of center visits and on-line orders, the number of unique users, and utilization of the FRC by program of enrollment. Other responses were deidentified before analysis.

DATA ANALYSIS

Data analysis was performed using descriptive statistics in Excel. Odds ratios and confidence intervals were used to determine differences between students who were food secure or food insecure as well as between students who used the FRC and those who did not. Qualitative data collected as free text responses were coded into major themes and summarized.

Results

FRC UTILIZATION

Of the 269 students who completed the survey, 183 (68.8%) had used the FRC at least once and 83 (31.2%) had never used the FRC; 3 participants did not answer this question. As shown in Table 1, demographic factors did not contribute to FRC utilization. Students who self-identified as male were no more likely to use the FRC than students who self-identified as female (OR: 0.87; 95% CI: 0.47-1.59). Students in one self-reported racial or ethnic group were no more likely to use the FRC than those in another. However, students classified as food insecure, based on their responses to both the 2-item and 6-item food insecurity screens were more likely to use the FRC than those who were classified as food secure.

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Table 1. Comparison of self-reported demographic characteristics and food-security status among OHSU Food Resource Center users and nonusers

	FRC Nonusers (n=83) (68.8%)	FRC Users (n=183) (31.2%)	Odds Ratio (95% CI)
Gender Identity			
Female	59 (71.1%)	136 (74.3%)	1 (Reference)
Male	21 (25.3%)	42 (23.0%)	0.87 (0.47-1.59)
Non binary	0 (0.0%)	4 (2.2%)	-
Prefer not to answer	3 (3.6%)	0 (0.0%)	-
Prefer to describe	0 (0.0%)	1 (0.5%)	-
Race			
White	64 (72.7%)	128 (67.0%)	1 (Reference)
American Indian/Alaska Native	2 (2.3%)	5 (2.6%)	1.25 (0.24-6.62)
Asian/Pacific Islander	9 (10.2%)	35 (18.3%)	1.94 (0.88-4.29)
Black	2 (2.3%)	4 (2.1%)	1 (0.18-5.60)
Multi Race	5 (5.7%)	12 (6.3%)	1.2 (0.41-3.55)
Prefer to Describe	2 (2.3%)	0 (0.0%)	-
Prefer not to answer	4 (4.5%)	7 (3.7%)	0.88 (0.25-3.10)
Ethnicity			
Non-Hispanic	73 (88.0%)	154 (84.6%)	1 (Reference)
Hispanic	6 (7.2%)	20 (11.0%)	1.58 (0.61-4.10)
Prefer to describe	1 (1.2%)	2 (1.1%)	0.95 (0.08-10.62)
Prefer not to answer	3 (3.6%)	6 (3.3%)	0.95 (0.23-3.90)
2-Item Food Screen			
Food Secure	61 (73.5%)	98 (53.6%)	1 (Reference)
Food Insecure	20 (24.1%)	75 (41.0%)	2.33 (1.30-4.20)
6-Item Food Screen			
Food Secure	70 (84.0%)	102 (56.7%)	1 (Reference)
Food Insecure	13 (15.7%)	64 (34.5%)	3.91 (2.01-7.59)

FOOD INSECURITY

As illustrated in Table 2, Of the 254 students who completed questions pertaining to food insecurity, 144 (54.1%) were classified as food secure while 110 (41.4%) were classified as food insecure by the 2-item screen, the 6-item screen, or both. Among our study sample, the odds of being classified as food secure was not associated with gender identity. The odds of being classified as food insecure was higher among students self-reporting multi-race (OR: 4.29, 95% CI: 1.45-12.71) and students self-reporting Hispanic ethnicity (OR 3.56, 95% CI 1.49-8.50) than students self-reporting White race and non-Hispanic ethnicity.

Students who reported having housing difficulties described a range of experiences, including feeling unsafe at home, taking on roommates, moving in with family, and living in cars or shelters, to name a few. Students who were classified as food insecure had higher odds of experiencing any housing insecurity (OR

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5.46, 95% CI 2.71-10.96). Students experiencing any housing insecurity had higher odds of using the FRC (OR 2.40, 95% CI 1.16-4.97; data not shown).

Difficulty purchasing school-related supplies, including textbooks, electronic subscriptions, and software programs, was also reported by students. Students classified as food insecure had higher odds of experiencing difficulty purchasing school-related items (OR 3.69, 95% CI 2.17-6.27) than those classified as food secure. Students experiencing any housing insecurity had higher odds of using the FRC (OR 2.64, 95% 1.51, 4.59) than those not experiencing housing insecurity (data not shown).

Table 2. Comparison of self-reported demographic characteristics, housing difficulty, and difficulty purchasing school supplies among students classified as food secure or food insecure

	Food Secure (n=144) (56.7%)	Food Insecure (n=110) (43.3%)	Odds Ratio (95% CI)
Gender Identity			
Male	36 (23.2%)	21 (19.1%)	1 (Ref)
Female	105 (67.7%)	84 (76.4%)	1.37 (.75-2.52)
Non binary	0 (0.0%)	4 (3.6%)	-
Prefer not to answer	2 (1.3%)	1 (0.9%)	-
Prefer to describe	1 (0.7%)	0 (0.0%)	-
Race			
White	118 (76.1%)	66 (60.0%)	1 (Ref)
American Indian-Alaska Native	4 (2.6%)	1 (0.9%)	0.45 (0.05-4.08)
Asian or Pacific Islander	20 (12.9%)	22 (20.0%)	1.97 (1.00-3.87)
Black	2 (1.3%)	3 (2.7%)	2.68 (0.44-16.45)
Multi Race	5 (3.2%)	12 (10.9%)	4.29 (1.45-12.71)
Prefer to Describe	0 (0.0%)	1 (0.9%)	-
Prefer not to answer	6 (3.9%)	5 (4.5%)	1.49 (0.44-5.07)
Ethnicity			
Non-Hispanic	129 (89.6%)	86 (78.2%)	1 (Ref)
Hispanic	8 (5.6%)	19 (17.3%)	3.56 (1.49-8.50)
Prefer to describe	3 (2.1%)	0 (0.0%)	-
Prefer not to answer	4 (2.8%)	5 (4.5%)	1.88 (0.49-7.18)
Housing Status			
No Housing Difficulty	103 (88.8%)	61 (59.2%)	1 (Ref)
Any Housing Difficulty	13 (11.2%)	42 (41.0%)	5.46 (2.71-10.96)
Difficulty Buying School Supplies			
No	93 (65.5%)	36 (33.3%)	1 (Ref)
Yes	49 (34.5%)	70 (64.8%)	3.69 (2.17-6.27)

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2-ITEM VS 6-ITEM FOOD INSECURITY SCREEN

The 6-item food insecurity screen is commonly used and was used in the past by the OHSU FIT to screen for food insecurity among students. In this survey, 241 participants answered both the 2-item and 6-item screen, 13 answered only the 2-item and not the 6-item, 6 answered the 6-item and not the 2-item, and 9 participants answered neither set of questions. As shown in Table 3, assuming the 6-item screen finds “true” food insecurity, the sensitivity of the 2-item screen in identifying food insecurity is 80.5% and the specificity is 84.8%. The positive predictive value is 71.3% and the negative predictive value is 90.3%.

Table 3: Comparison of Food Security Classification by the 2-item and 6-item food insecurity screeners

		6-Item Screen		
		Food Insecure	Food Secure	
2-Item Screen	Food Insecure	62	25	0.7126
	Food Secure	15	139	0.9026
		0.8052	0.8476	

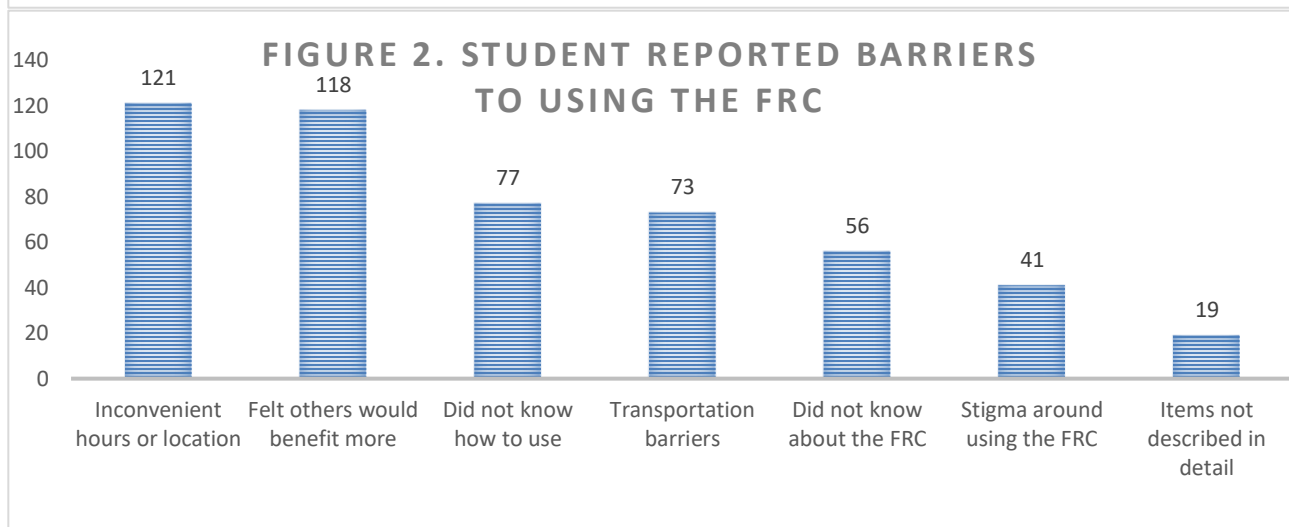
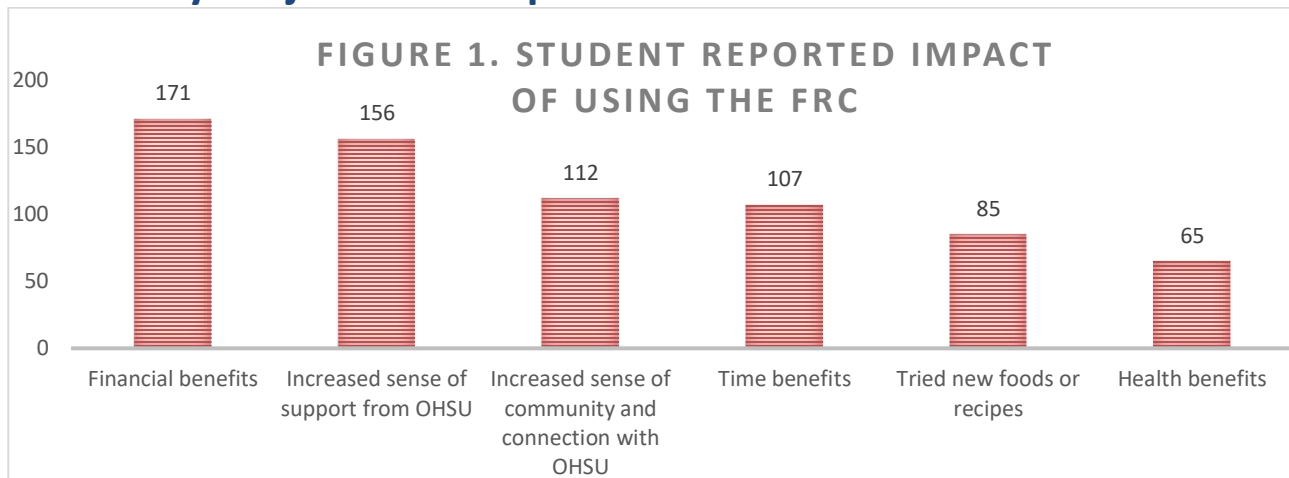
IMPACTS OF USING THE FRC

Students using the FRC selected from a list of potential impacts of using the FRC and indicated all that applied to them (Figure 1). The most commonly identified individual impacts of FRC use included financial benefits, time benefits, and trying new foods/recipes. Students who used the FRC also reported feeling an increased sense of community with and support from OHSU.

BARRIERS TO USING THE FRC

Students who did or did not use the FRC were asked to report on barriers to its use. While stigma and feeling that others would benefit more from the service were identified as barriers, logistical barriers like inconvenient hours or location of the FRC, uncertainty about how to use the service, and transportation barriers were also identified (Figure 2).

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Discussion

FRC UTILIZATION

FRC utilization did not vary based on demographic factors. However, students who were classified as food insecure were more likely to use the FRC than those classified as food secure. This most likely means that the FRC is serving students who are food insecure, one of its primary goals. To better understand the impact of student food insecurity, it will be valuable to further evaluate the FRC's perceived impact by asking students about their perceived food security status both before and after they start using the FRC.

FOOD INSECURITY

Food insecurity among our student sample was 41.4% as assessed by the 2-item food insecurity screen. This is higher than previous studies at OHSU which found food insecurity of about 25%. However, this could be explained, at least in part, by the population of students who responded to the survey and those who had used the FRC. In future evaluations of the FRC, it could be useful to determine perceived food insecurity before and after starting to use the FRC. Food security status could be assessed either by the 2-item or 6-item screen. The 6-item screen may provide slightly more information as it can classify students into food

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secure, low food security, and very low food security groups. If students move from very low to low food security, even if they remain food insecure, it could help to provide proof of concept for the FRC and give important metrics about its quantitative impact.

Importantly, the 2-item food screen performed well at sensitively detecting students who were food insecure based on the 6-item screen and was able to positively screen for students who were actually food insecure. The two-item screen could serve as a useful tool in the future to reduce participant burden as students were less likely to respond to the 6-item screen than the 2-item screen.

Students experiencing food insecurity and who used the FRC were more likely to have difficulty with housing and purchasing items for school. This is important for the OHSU administration and the FRC to know as it continues to grow and expand the services it provides to students beyond basic needs like food. As we move forward, we hope to establish programs that address not only food security but broader basic needs for students. Innovative programs, like those established at Portland State University, support students through emergency grants to assist them with financial hardship and create infrastructure to help students through housing insecurity.

IMPACTS OF USING THE FRC

Most notably, students reported benefits of using the FRC regarding their time, finances, and health; trying new recipes, and experiencing a feeling of connection and community with OHSU. This was a major goal in establishing the FRC and is something that is part of its ongoing mission.

BARRIERS TO USING THE FRC

Interestingly, logistical barriers were those most noted in limiting student use of the FRC. This information is quite useful, as it has been part of casual FRC feedback intermittently but has never been quantified. As the FRC moves forward and aims to better serve students, these limitations will need to be addressed. This data will be helpful in providing evidence to obtain additional space in a more convenient location for students, especially those who are primarily on the South Waterfront.

Conclusions (2-3 summary sentences)

The Food Resource Center was established to serve students, reduce food insecurity and address basic needs, and to foster a sense of support and community within OHSU. Our findings indicate that the FRC is used by students experiencing food insecurity and that those using this resource feel that they are receiving financial, time, and health benefits and feel more connected to OHSU. As we look to the future, the barriers to use that were described, most notably inconvenient location and hours of operation will help guide the ways we adapt this resource to serve more students.

References (JAMA style format)

1. Pourmotabbed A, Moradi S, Babaei A, et al. Food insecurity and mental health: A systematic review and meta-analysis. *Public Health Nutr.* 2020;23(10). doi:10.1017/S136898001900435X
2. El Zein A, Shelnutt KP, Colby S, et al. Prevalence and correlates of food insecurity among U.S. college students: A multi-institutional study. *BMC Public Health.* 2019;19(1). doi:10.1186/s12889-019-6943-6

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3. Martinez SM, Grandner MA, Nazmi A, Canedo ER, Ritchie LD. Pathways from food insecurity to health outcomes among California university students. *Nutrients*. 2019;11(6). doi:10.3390/nu11061419
4. Patton-López MM, López-Cevallos DF, Cancel-Tirado DI, Vazquez L. Prevalence and Correlates of Food Insecurity Among Students Attending a Midsize Rural University in Oregon. *J Nutr Educ Behav*. 2014;46(3). doi:10.1016/j.jneb.2013.10.007
5. Hattangadi N, Vogel E, Carroll LJ, Côté P. “Everybody I Know Is Always Hungry.. But nobody asks why”: University Students, Food Insecurity, and Mental Health. *Sustain*. 2019;11(6). doi:10.3390/su11061571
6. Demunter J, Rdesinski R, Vintro A, Carney P. *OHSU Food Insecurity Report*. Portland, Oregon; 2018.
7. Flynn MM, Monteiro K, George P, Tunkel AR. Assessing food insecurity in medical students. *Fam Med*. 2020;52(7). doi:10.22454/FamMed.2020.722238
8. Riddle ES, Niles MT, Nickerson A. Prevalence and factors associated with food insecurity across an entire campus population. *PLoS One*. 2020;15(8 August). doi:10.1371/journal.pone.0237637
9. Soldavini J, Berner M, Da Silva J. Rates of and characteristics associated with food insecurity differ among undergraduate and graduate students at a large public university in the Southeast United States. *Prev Med Reports*. 2019;14. doi:10.1016/j.pmedr.2019.100836
10. Sackey JD, Pike K, Rothpletz-Puglia P, Brody R, Touger-Decker R. Food Insecurity Among Health Sciences Graduate Students at a Large Northeastern University. *J Nutr Educ Behav*. 2020. doi:10.1016/j.jneb.2020.11.003
11. Bruening M, Argo K, Payne-Sturges D, Laska MN. The Struggle Is Real: A Systematic Review of Food Insecurity on Postsecondary Education Campuses. *J Acad Nutr Diet*. 2017;117(11). doi:10.1016/j.jand.2017.05.022
12. OHSU Office of the Registrar. *2020 Fact Book*. Portland, Oregon; 2020.
13. El Zein A, Mathews AE, House L, Shelnutt KP. Why are hungry college students not seeking help? Predictors of and barriers to using an on-campus food pantry. *Nutrients*. 2018;10(9). doi:10.3390/nu10091163
14. Daugherty J. Experiences of Students Utilizing a Campus Food Pantry. *ProQuest Diss Theses*. 2017.
15. Fong K, Wright R, Wimer C. The cost of free assistance: Why low-income individuals do not access food pantries. *J Sociol Soc Welf*. 2016;43(1).
16. Yanniello S. Determining the Physical and Social Barriers that Prevent Food-Insecure Students at the University of Arkansas from Using the Jane B. Gearhart Full Circle Campus Food Pantry. 2018.
17. McArthur L, Fasczewski K, Farris A, Petrone M. Use and Perceptions of a Campus Food Pantry Among Food Insecure College Students: An Exploratory Study from Appalachia. *J Appalach Heal*. 2020;2(2). doi:10.13023/jah.0202.02

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Appendix

Food Resource Center Survey

The purpose of this survey is to learn more about you and your experiences with food security/insecurity as a student at OHSU/PSU. The survey has 21 questions divided into three sections and should take less than 10 minutes to complete. Thank you. ***We greatly appreciate your participation!!!***

Section 1: Demographics:

Instructions: These first questions will help us describe who completed this survey. Please choose the response that best characterizes you or your current situation.

- 1) What is your current age in years? _____ Years
- 2) Gender:
 1. Male
 2. Female
 3. Transgender
 4. Prefer to describe: _____
 5. Prefer not to answer
- 3) In which program of study are you enrolled?
 1. Medical School (including M.D., combined M.D./Ph.D. or combined M.D./M.P.H, MD/MCR)
 2. Graduate Medicine Programs (Certificates, M.S. or Ph.D. Graduate Programs)
 3. Physician Assistant
 4. Human Nutrition (including Dietetic Internship and M.S.)
 5. Undergraduate Health Profession Programs (Radiation Therapy, Emergency Medical Tech/Paramedics, Laboratory Services Programs)
 6. School of Dentistry
 7. School of Nursing (including Undergraduate and Graduate Programs)
 8. College of Pharmacy
 9. School of Public Health
 10. Other (please describe): _____
- 4) What is your race?
 1. American Indian/Native Alaskan
 2. Asian or Pacific Islander
 3. Black
 4. Native Hawaiian
 5. Multi-race: _____
 6. White
 7. Prefer to describe: _____
 8. Prefer not to answer
- 5) What is your ethnicity?
 1. Hispanic
 2. Non-Hispanic
 3. Prefer to describe: _____

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4. Prefer not to answer

Section 2: OHSU Specific Questions

***Instructions:** These next questions ask about food resources you used on and off-campus during the past 12 months. Please indicate the response that best fits your situation:*

- 6) What was your primary campus?
 1. Portland
 2. Ashland
 3. Klamath Falls
 4. La Grande
 5. Corvallis
 6. Monmouth
 7. Other (please describe): _____

- 7) What was the primary method of learning used within your program of study?
 1. In person
 2. Online/ via distance learning
 3. Hybrid in person/online
 4. Other (please describe): _____

- 8) Did you use any of the following **OHSU campus resources** to access food? Please select all that apply.
 1. Grocery Box/ Food Resource Center Grocery Order (including pick up, delivery, and shopping hours)
 2. On-campus food vendor student discounts
 3. OHSU Food Resource Guide available on the Student Health & Wellness Website
 4. SNAP enrollment assistance
 5. Did not use any campus resources
 6. Other (please describe): _____

- a) If you used the Grocery Box/Food Resource Center (FRC), which service(s) were most useful?
 1. Pick Up Service
 2. Delivery Service
 3. Food Resource Center Shopping Hours

- b) Of the items available to you through the Food Resource Center, which were most important to you?
 1. Fresh Produce
 2. Refrigerated/Frozen Items
 3. Personal Hygiene Items
 4. Pantry Staples
 5. Snack foods
 6. Other (please describe): _____

- c) If you used Grocery Box/Food Resource Center, how many times did you utilize this service?
 1. Once
 2. 2-5 times
 3. 5-10 times

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4. 10+ times
5. Other (please describe): _____

d) How has using the Food Resource Center impacted you?

1. Increased sense of community and connection with OHSU
2. Increased sense of being supported by OHSU
3. Tried new foods or recipes
4. Financial benefits
5. Health benefits
6. Time benefits
7. Other (please describe): _____

e) How satisfied are you with your Grocery Box/Food Resource Center experience:

	Very satisfied	Somewhat satisfied	Neither satisfied nor dissatisfied	Somewhat dissatisfied	Very dissatisfied	n/a
Ordering Items						
Picking Up Items						
Receiving Delivered Items						
Shopping hours						
Selection of items available						
Communication you receive about your order						
Volunteer support with grocery box or at the Food Resource Center						

f) If you have not used Grocery Box/Food Resource Center in the last 12 months, please indicate why:

1. Did not know about the service
2. Did not know how to order
3. Did not know where to pick up
4. Inconvenient hours for pick up
5. Inconvenient pickup location
6. Unable to get to campus
7. Felt others would benefit more from the service
8. Stigma around using the service
9. Order form was too long or complicated
10. Items were not described in enough detail

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11. Difficult to take food home due to transportation issues
12. Other (please describe): _____

- 9) What resources would you like to see provided at the Food Resource Center?
1. More food variety: Please describe _____
 2. Kitchen/Cooking supplies (cooking utensils, mason jars, small appliances)
 3. Reusable food storage supplies
 4. Small appliances Please describe: _____
 5. Recipes/cooking classes
 6. Pre-assembled bags of staples
 7. Other: Please describe _____
- 10) If the Food Resource Center was open to other OHSU members (like residents and employees), how would your use of the Food Resource Center be affected?
1. More likely to use
 2. Less likely to use
 3. Equally likely to use
 4. Other (please describe): _____
- 11) Which of the following resources would you be likely to use to improve your access to food if they were available to you through OHSU? Please select all that apply.
1. Retail food discounts/prepared meals on campus
 2. Access to additional food storage (refrigerators, freezers, student lockers) on campus
 3. On-campus food preparation facilities (i.e. microwaves, toasters, stovetops)
 4. Cooking classes
 5. Other (please describe): _____

Section 3: Food Access Questions:^{1,2}

*Instructions: These next questions ask about shopping for food and the food eaten by you and those who are **dependent** on you for food in your household, such as family members or roommates. Please indicate the response that best fits your situation:*

	Never True	Sometimes True	Often True	Don't Know	Prefer Not to Answer
12) In the last 12 months, I/we worried whether our food would run out before we got money to buy more.	1	2	3	4	5
13) In the last 12 months, the food that I/we bought just didn't last, and	1	2	3	4	5

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I/we didn't have money to get more.					
14) In the last 12 months, I/we couldn't afford to eat balanced meals.	1	2	3	4	5

15) In the last 12 months, did you or other adults in your household ever need to cut the size of your meals or skip meals because there wasn't enough money for food or you needed to allocate available funds away from your food budget?

1. Yes
2. No
3. Don't Know
4. Prefer not to answer

a. If Yes, how often did this happen?

Only 1 or 2 Months	Some Months but Not Every Month	Every Month or Almost Every Month	Don't Know	Prefer Not to Answer
1	2	3	4	5

16) In the last 12 months, did you ever eat less than you felt you should because there wasn't enough money for food?

1. Yes
2. No
3. Don't Know
4. Prefer not to answer

17) In the last 12 months, were you ever hungry but didn't eat because there wasn't enough money for food?

1. Yes
2. No
3. Don't Know
4. Prefer not to answer

18) In the last 12 months, were you ever unable to purchase school-related items, such as textbooks, electronic subscriptions, software programs, etc) due to cost?

1. Yes
2. No
3. Don't Know
4. Prefer not to answer

19) In the last 12 months, have you been unable to afford the full rent or housing costs?

1. Yes
2. No
3. Prefer not to answer
4. Prefer to describe: _____

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20) In the last 12 months, have you experienced any of the following difficulties with housing?

1. Poor housing conditions; Please describe _____
2. Home safety concerns; please describe _____
3. Unplanned moves due to finances
4. Overcrowding due to finances
5. Moving in with family unexpectedly due to finances
6. Spent the night in a shelter or car
7. Experienced a utility shutoff due to difficulty paying expenses
8. Other difficulties; please describe _____
9. I have not experienced any difficulties with housing.

21) Is there any additional information that you would like us to know about your ability to access food or recommendations that you have for OHSU to improve your access to food?

Thank you for completing this survey!! If you would like more information about OHSU food resources, please visit: <https://o2.ohsu.edu/student-central/health-wellness/student-food-resources/index.cfm>