Spring 2020

Stevenson Center Report for the School Street Food Pantry

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<u>Methodology</u>

For this study, we employed several different methods to collect data on patrons of the School Street Food Pantry. We primarily used three methods to come to our conclusions, which were a focus group, survey, and interviews. Our ability to complete these to the fullest of our expectations was severely limited by the onset of the COVID-19 crisis, which forced us to social distance from patrons. However, we were able to complete all three methods as planned from the onset of this project, and gathered much information proving this study still fruitful.

We completed one focus group for this project, which included three patrons, and was observed by a food insecurity researcher (who is also a Pantry board member). Two researchers on the research team facilitated the focus group. We recruited participants through several means. First, before social distancing was implemented, we collected around 17 email addresses from patrons of the pantry who were waiting in line on a Friday and were willing to participate in our research. This became a very fruitful source of participants for all parts of the research project. We also attempted to recruit participants through a Facebook posting of the School Street Food Pantry Facebook page and a handout in boxes of food the pantry provided. This had contact information and requested assistance in research. However, these two recruitment strategies did not recruit any participants to the focus group. As we were unable to meet in person because of the COVID-19 crisis, we completed the focus group over the video software Zoom. Two members of our research group completed a focus group with open-ended questions and allowed for ample time for participants to elaborate. The focus group was about one hour in length. At this focus group, we had 3 participants. Participants were very willing to provide information and helped us understand patrons of the pantry much better than before. There was no incentive for participation and participant's identifying information will remain confidential. We attempted to complete a second focus group but participants cancelled or misunderstood instructions for the Zoom meeting. However, these participants were later interviewed for the project.

The second method we used was an online anonymous survey. We used Google Forms for our data collection because it is easily distributed and the data was collected in an efficient manner. Our original plan was to collect survey responses in person. However, this was impossible with the COVID-19 crisis. We instead chose to collect surveys online. We recruited participants through posts on the School Street Food Pantry Facebook page (with the most success), through our email list, posting the survey on the international student's Facebook group (as we know a high number of international students use the pantry), through the Grad School newsletter, with flyers in boxes of food provided by the pantry, and the researchers personal social media accounts. In the end, we recruited 34 participants for the survey. Our original pre-COVID-19 goal was 100 responses, but we revised that goal to 30 responses, which we successfully met. The survey was open for 2 weeks, and we had the most success recruiting participants through our Facebook postings. From the time stamps on our data we saw that after every posting we had a spike in responses, which was not true of other recruiting tactics we used.

This information could be useful for future research. Our survey was entirely anonymous and was collected through convenient sampling methodology. All survey respondents gave consent to have their data collected anonymously and agreed to not receiving compensation for their responses. We feel that the data represents and confirms some of our observations when it comes to demographics of pantry patrons.

The third and final method we used was interviewing patrons and a volunteer about their experiences. We used similar questions from the previous focus group and these interviews helped shape our understanding. We recruited patrons through our email list that we collected. We chose to interview two international students and one longtime volunteer at the pantry so we could better understand these two perspectives. Interviews were completed by two researchers and lasted about one hour with each interviewee. Interviewees were not given compensation and personally identifiable information will remain confidential. All interviews were completed using the video software Zoom and were conducted remotely as we did this research during a period of social distancing. We did not attempt to use other recruiting methods, as there was not success with flyers or Facebook posts during the recruitment of participants for the focus group or interviews. However, Facebook was a very recruitment method for our survey. Overall, the information was very fruitful and gave good insight to specific issues.

With these three methods, we were able to come to conclusions about the needs of patrons. Throughout this paper we will discuss both qualitative and quantitative data together. These two forms of data reveal several associations between themselves and inform us equally; we see both to be very valuable. For our analysis, we used the statistical software SPSS and constructed tables using Microsoft Excel and Google Forms. We are open to questions on our methodological choices and there is further information on our IRB form submitted to the internal review board at Illinois State University.

Findings

Demographics

Through conversations with the School Street Food Pantry staff and our own observations at the pantry, we had an idea of the demographics of the patrons of the School Street Food Pantry. Our survey data confirms many of these assumptions and sheds light on who uses the pantry. For this section we will be primarily discussing survey data as it was the method with the largest participation rate and the most telling in this area of data.

Gender, Age, Race, and Sexual Orientation

The gender identity of patrons skews to female with 58.8%, while males were 32.4% and trans or gender queer were 8.8%. This would indicate that the majority of patrons are female, but this is only slightly. This reflects a similar gender representation to ISU.

The age range of the patrons we surveyed was from 19 to 35. The mean age was 24.27, the median was 24.5, and the mode was 25 (or 24.2% of the sample). There is a definite skew toward the early twenties age range, which would make sense as the pantry serves student patrons. As there were only two respondents who were 19 and zero respondents who were 18, there may be areas for improvement with outreach to younger students or first years. As most

ISU 1st and 2nd year students live in dorms, there may be more success with outreach to institutions like Heartland Community College.

There was diversity in the racial makeup of the sample. The data shows that 44.1% of respondents identified as White/European Descent, 32.4% of respondents identified as Asian, and 17.6% of respondents identified as Black/African-American/African Descent. Approximately 5.8% of the sample identified as other and specified racial identities that do not fit into these answer categories. Although the largest response group is white, they are not the majority of patrons using the pantry, from our data.

From the data we collected, there was a range of sexual orientations in the pantry patrons as well. Our findings showed that 65.6% identified as heterosexual, 12.5% identified as homosexual, 12.5% identified as pan-sexual, and 9.4% of patrons identified as bi-sexual. The researchers had no preconceived assumptions of sexual orientation of the patrons. However, this shows that there is a range of sexual orientations represented.

Relationships, Family, Children, and Dependents

From our data, a majority of patrons are single and not cohabitating with a romantic partner. Approximately 76.5% of our sample were single, 14.7% were cohabitating, 5.9% were married (two respondents), and 2.9% were in a non-cohabiting relationship. This could indicate that patrons are mostly living alone and may be the sole provider for their needs.

We asked respondents if they had any children, and confirmed some of our assumptions, that a vast majority do not. According to our findings, 97.1% of respondents do not have children, and only one respondent had children (which they had 2). This again sheds light on the idea that a majority of patrons use the pantry solely for themselves and not for their children, as many do not have children.

We asked respondents about whether other adults rely on them for food. A majority (76.5%) of respondents said that no other adults rely on them for food. However, a surprising number of respondents said that other adults rely on them for food. The survey revealed that 14.7% of respondents said 1 other adult relies on them, 2.9% said 2 adults rely on them, and 5.9% said 3 adults rely on them. This confirms some of the data we collected from our focus group: that students are providing for more than just themselves. In our focus group, a participant shared that they actually provide a large portion of food for their entire family. This is troubling as it shows that food insecurity may be beyond just our patrons and could be a wider issue in the community.

School and Work

We asked several questions about what college or university the respondents attend, what degree program they are in, and how much they worked. We confirmed some of our assumptions: that a vast majority of patrons go to Illinois State University. From our survey, 94.1% of respondents went to ISU and 5.9% of respondents go to Illinois Wesleyan University. We could assume that this may be because of the proximity to ISU's campus but also may

indicate that more outreach to other higher education institutions could be beneficial to the community.

There is a split between respondents on what degree programs respondents are in. However, a majority are in a graduate level program. The survey showed that 55.9% of respondents are in a masters program, 41.2% in a bachelors program, and 2.9% in a PhD/Doctorate program. There may be selection bias in this statistic but we believe it indicates that a majority of respondents are in a graduate level program and are experiencing degrees of food insecurity. This may also point to a problem with compensation for graduate students and the low wages paid for assistantships at ISU.

From our data, we discovered that a majority of respondents are employed part-time. Within our results, 66.5% of respondents were employed part-time, 30.3% were unemployed, and 3% (1 respondent) were employed full-time. This data may show that respondents are working yet are having a hard time making ends meet. The employment status of respondents does not seem to be the driving factor in the use of the pantry. In addition, this data reinforces some other things we found such as the high number of international students who use the pantry and the number of students in various programs.

International Students

From having conversations with pantry staff alongside our observations, we found that there is a large number of international students who use School Street Food Pantry. Our survey data confirms this. Approximately 58.8% of the total respondents identified as international students (see Figure 1).
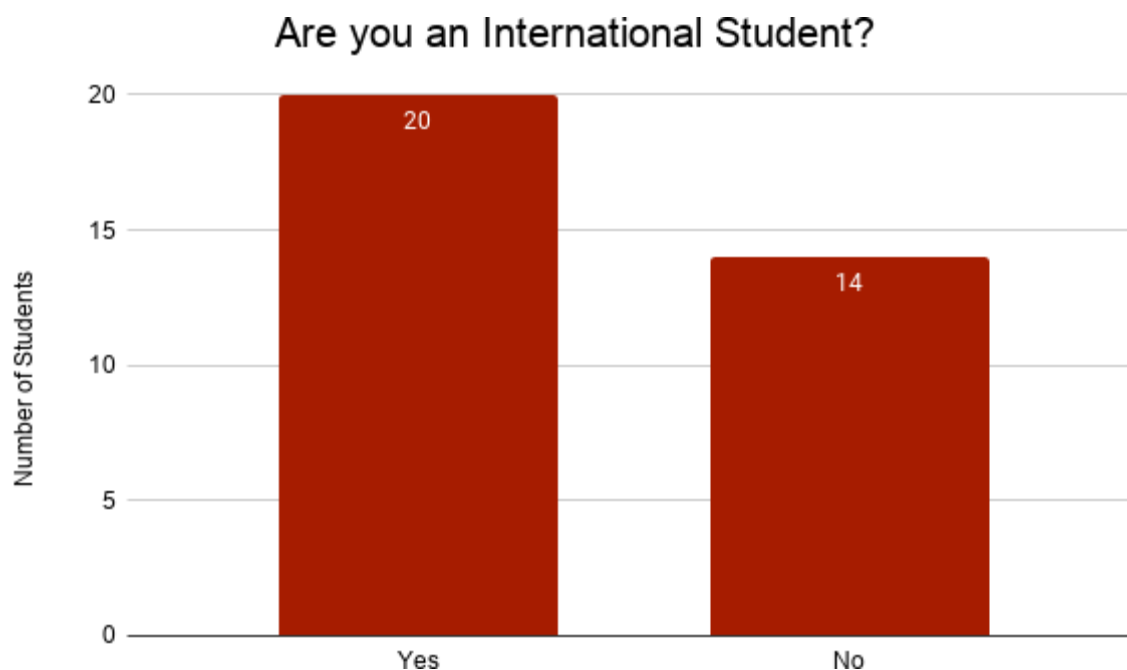

Figure 1. Survey results depicting number of International Students

The countries that students are from are quite diverse and vary geographically. These backgrounds include: Nigeria, India, Bangladesh, Pakistan, Brazil, Ghana, Russia, Tanzania, Vietnam, and Nepal. Nigeria is the country with the highest number of respondents (4) with Bangladesh and India followed closely with 3 each. The Indian Subcontinent (defined as India, Bangladesh, Pakistan, and Nepal) is the largest geographical region represented in our respondents with 9 respondents, or half (50%) of the international student respondents. West-Africa is the second highest geographic region with 5 respondents or 27.8% of the international student respondents. This indicates that two geographic regions represent 77.8% of the sample of international students who use the pantry. We will elaborate more on international students' needs and concerns below—specifically, data from our focus groups and interviews.

Structure

Our personal observations from the Pantry allowed us to experience and better understand the physical structure and processes of the Pantry. During our time inside and around the pantry, we identified a few different segments we decided to further investigate in our research. Themes within this category were also brought up by participants in our study.

Wait Time in Line

Patrons of the Pantry can be seen lining up about 30 minutes before opening. In many of our conversations with patrons, the dynamics of the line were brought up. In our initial focus group, one individual brought up the length of the line and the discomfort of waiting in the line, especially during times of extreme weather. Other individuals in the focus group mentioned that they had left the line before because it was too cold or the line was too long. This prompted us to craft a relevant question for our survey. We asked, "Have you ever left the line to access the pantry due to weather, stigma (not wanting to be seen accessing the pantry), wait time, or never left the line? [check all that apply]". About two thirds of respondents indicated that they had never left the line (see Figure 2).
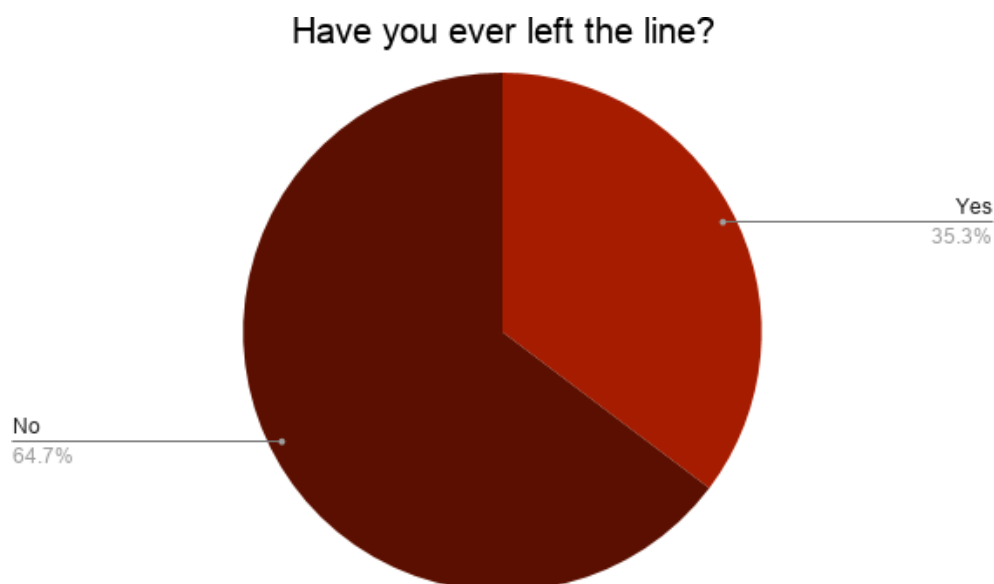

Figure 2. Survey results depicting students that have left the line

for various reasons or have not left the line.

Of the students that had left the line, 8 (23%) said they left because of wait time, 6 (18%) left because of weather, and 4 (12%) left because of stigma. We also followed up on this issue with participants in our interviews. One interviewee explained that they only will go to the Pantry very early to wait in line to ensure they will get first picks, or they will wait until late (about 5:30pm) to ensure they don't have to wait in line and will just then expect to have less choices of food. Additionally, we learned from our interviews that it is common practice for groups of friends to send one person early to the Pantry, have them "scout" the selection for the week, and then report back to friends if they should come or not depending on the selection. We also heard about some instances of confusion or frustration with figuring out how to navigate the Pantry for the first time; those individuals did mention though, that their negative experiences were from the early days of the Pantry's operations. Several students were curious about students with disabilities or students with other barriers to the pantry and wondered if there are students that need the Pantry but don't access it because of the physical, structural, difficulties. Students did voice appreciation of the Pantry's bags, and the general kindness and willingness to help by Pantry volunteers.

Another thing we were curious about was how people access the pantry as well as what their frequent mode of transportation is. In our survey we asked, "How do you get to the School Street Food Pantry?", and the majority of respondents said that they walk. From our conversations, we learned that walking also sometimes includes taking the bus (see Figure 3).
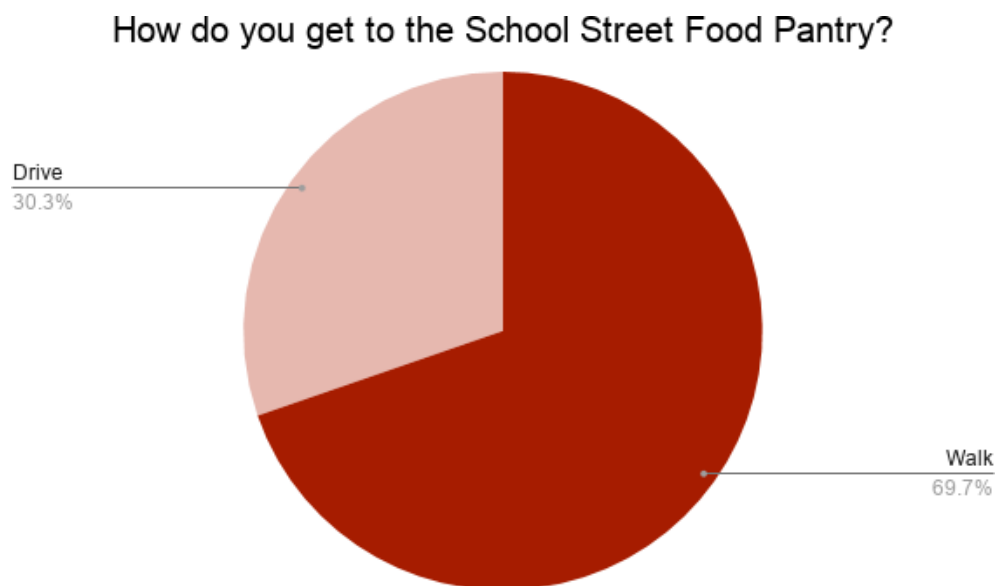

Figure 3. Survey results depicting student's transportation

Data Collection from Patrons

During our observations of the Pantry's check-in process, we experienced the nuances of the registration and data collection. Though the questions to register students are relatively brief, there is often difficulty in their communication, particularly with students who do not speak

English as their primary language. We were curious to hear from patrons on this topic. We first heard in our focus group some concern over the question "what is your gender identity?". One student explained that they felt this question should not be asked in public, especially because many international students do not understand what is being asked. This student explained that they had to have it asked many times and then have a friend clarify the meaning. They felt embarrassed and were not happy about it. This individual asked if maybe this specific data could be collected privately or non-verbally on the laptop itself. Another student in the focus group expressed that they understood the data was collected for grants and to receive more funding, which prompted a different student to ask why the question about dependents is asked. Overall, we found that students who felt negatively toward the data collection were much more open to it once they understood the necessity of it. This could play a role in how pantry volunteers communicate this during registration with patrons moving forward.

Again, in our interviews we heard similar themes around difficulty of understanding the questions at registration and confusion around data collection. In our focus group, students said they would be open to sharing more information, including their emails, if there was good reason. We followed up on this question in our survey, asking "what type of information would you be interested in receiving from the pantry (via email), check all that apply: general pantry updates, resources related to food/ hunger, recipes, or I would not want to share my email". We found that while several students were interested in receiving information via email, many others were strictly opposed to the idea (see Figure 4).
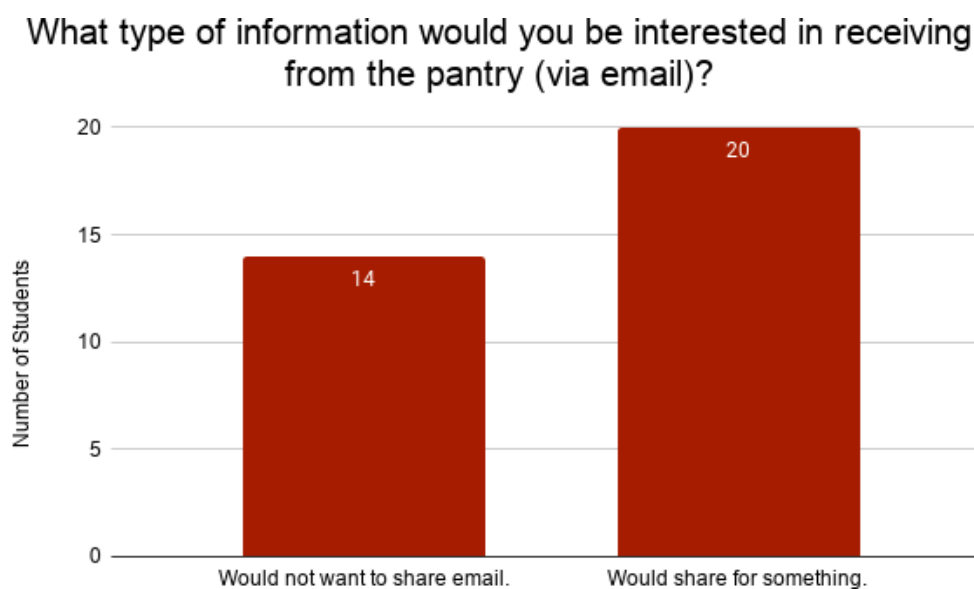

Figure 4. Survey results regarding receiving information via email

Of the 20 students that were interested in receiving information, 18 were interested in receiving general pantry updates, 10 were interested in resources related to hunger, and 8 were interested in recipes.

SNAP and Other Resources

Through our interviews, focus groups, and survey results, we have seen that, of the Pantry's patron population, many are able to qualify for SNAP benefits, but have been unaware of this resource and other similar resources. We believe that the School Street Food Pantry can, as an organization, supply information regarding SNAP and other resources related to food and hunger within the Bloomington-Normal area and McLean County as a whole. Our data shows that patrons of the Pantry would be open to receiving communications from the Pantry, with a large portion of that communication being focused around resources related to food and hunger.

Work and SNAP

To be eligible for the Supplemental Nutrition Assistance Program (SNAP), commonly known as food stamps, one must be employed and working 20 hours per week. As a survey question, we asked "What is your employment status?". The responses to this question showed that a majority of respondents are employed. 66.5% of respondents were employed part-time, 30.3% were unemployed, and 3% (1 respondent) were employed full-time. This data shows that while students are working, they may be having trouble making ends meet and turning to the Pantry for help with food and other items. With 68.5% of respondents being employed full-or-part-time it is reasonable to suggest that a majority of the respondents would qualify for SNAP benefits because they are employed and are working the required 20 hours per week. Interview and focus group data support the suggestion that Pantry patrons are employed and could qualify for SNAP benefits.

We asked, "Do you receive SNAP (Food Stamp) benefits?" as well. The responses to this question showed overwhelmingly that respondents do not receive SNAP benefits. In fact, 82.4% of respondents do not receive SNAP benefits, 11.8% do receive SNAP benefits, and 5.9% of respondents do not know if they receive SNAP benefits (see Figure 5).
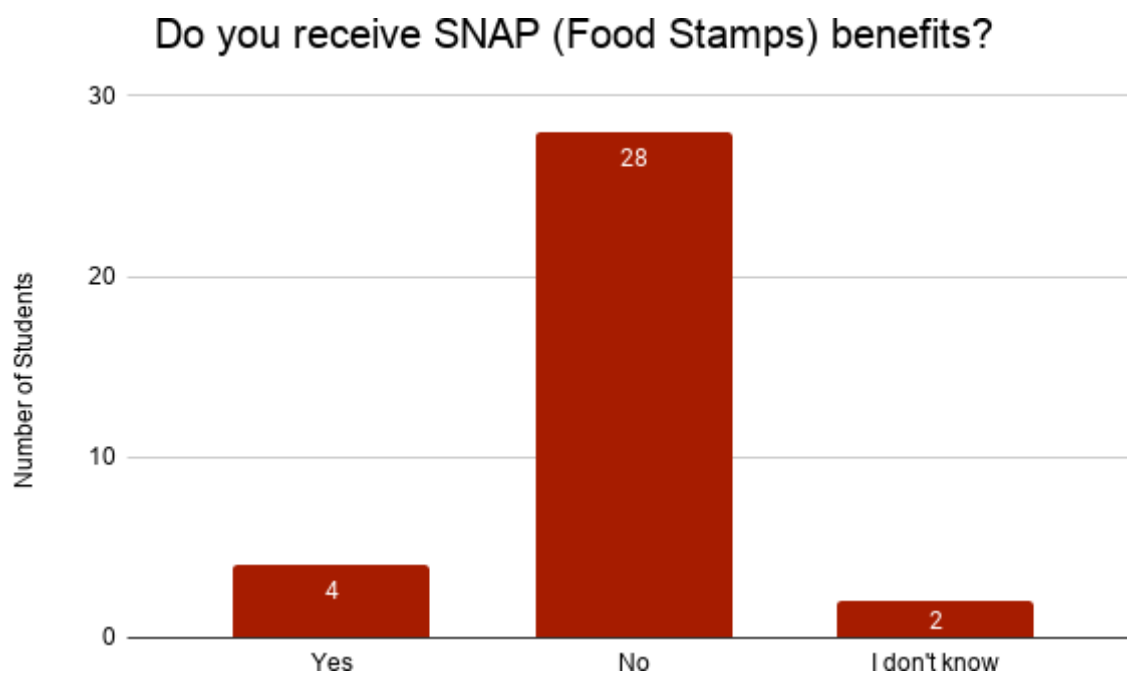

Figure 5. Survey results regarding SNAP benefits.

Taking this data with the employment status responses, shows that Pantry patrons are employed and may qualify for SNAP benefits, but for various unknown reasons, they are not using SNAP benefits. We understand that student status and international student status may affect SNAP eligibility. Given the current situation around COVID-19 and the likely fallout, there is and will be a greater need for SNAP benefits, and the effective communication of those benefits will be vital.

Communication of Resources

With this growing need for SNAP benefits and other resources related to food and hunger, the communication of these resources will be crucial for those who need the resources the most to receive them. We believe this is where the Pantry can become an even more valuable resource than it already is. Focus group participants stated that they would be open to sharing their email with the Pantry if it had a good reason. To follow up this question, our survey asked, "What type of information would you be interested in receiving (via email) from the Pantry? (check all that apply)". Figure 4 shows that many respondents, 20, showed an interest in sharing their email in order to receive information. The respondents put an emphasis on the "Resources related to food/hunger" response, with 30.3% of responses being in favor of receiving information regarding resources related to food and hunger. Our focus group and survey data has shown that some respondents do not know what SNAP is. The Pantry could serve as an information source for its patrons regarding SNAP eligibility and the process of applying.

Food insecurity

Students Usage of the Pantry

The results from our focus group, survey respondents, and interviews provided much needed insight on the reality of hunger for a portion of pantry patrons. Through an assessment of prior academic literature, there was an established understanding that food insecurity affects college students across the country in a multitude of ways. In this study, the data gathered from patrons of the pantry reinforced several similar findings concerning hunger and food shortage among students.

As seen in Figure 6, among the 34 respondents in our survey, over half of these patrons attend the pantry between 2 to 4 times a month, 10 of which often attend 4 times in a month (see Figure 6).

How often do you come to the School Street Food Pantry?
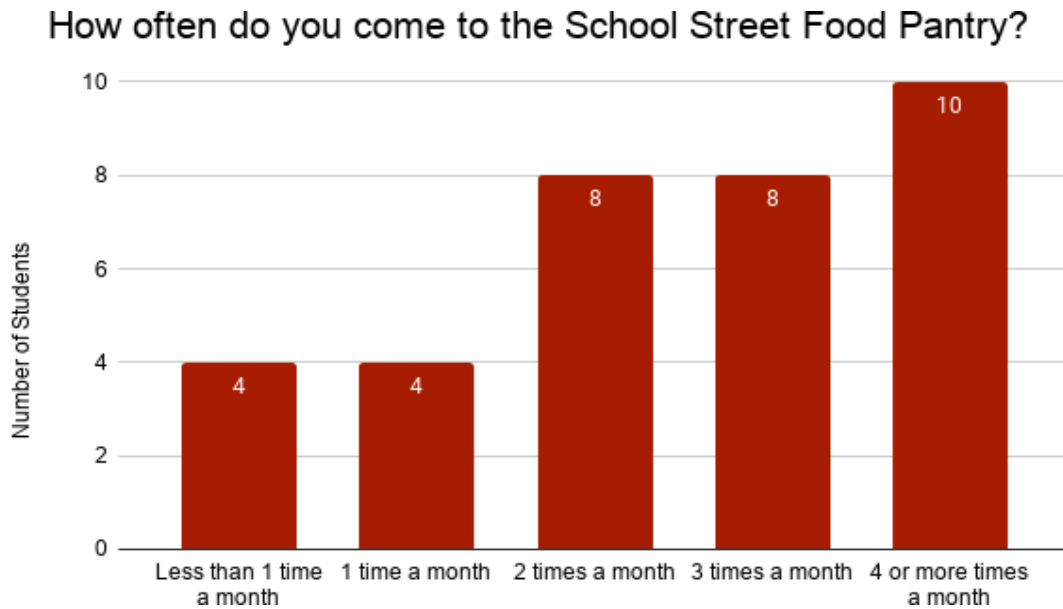
Figure 6. Frequency of Pantry Attendance

Figure 7 reveals that 29 of the 34 respondents only attend the School Street Food Pantry as opposed to other pantry options, and all of our focus group respondents echoed the same results (see Figure 7).

Do you go to additional food pantries other than the School Street Food Pantry?

Figure 7. School Street Food Pantry Usage

These findings further amplify how much of an asset the pantry truly is for patrons, especially considering the employment status of many, as mentioned above.

The Pantry's Role as a Food Source

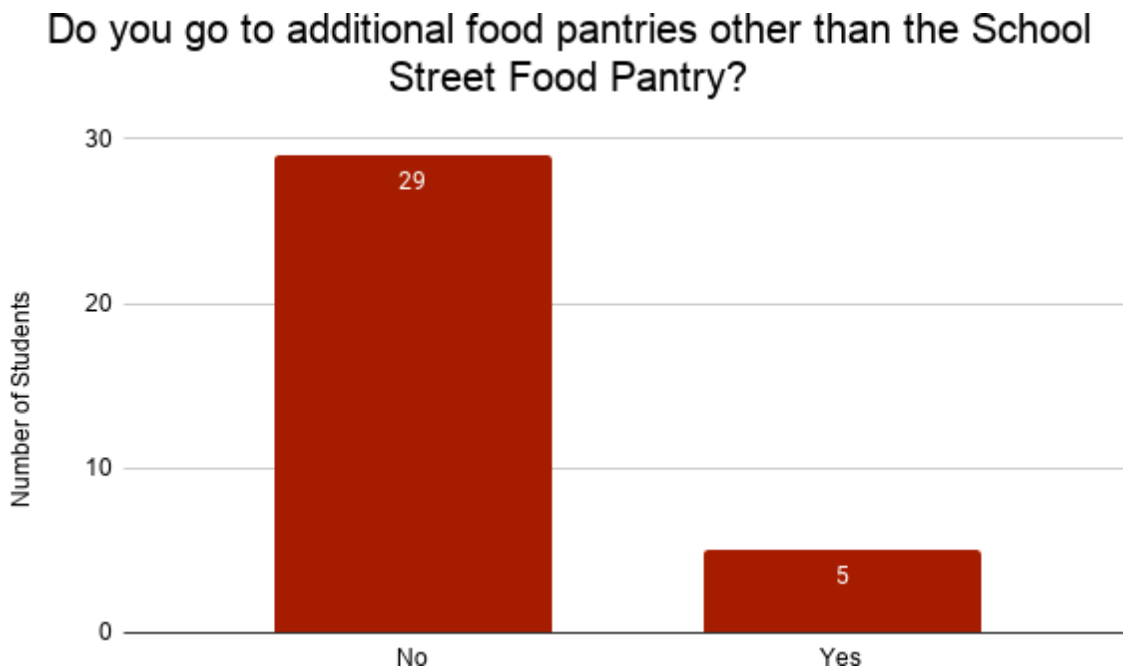 Participants from our focus group and interviews primarily stated that they have at least 2 meals a day, eating snacks as a supplement as well. However, while the majority of survey respondents (67%) claim that the pantry is not their primary source of food, the frequency with which certain patrons attend the pantry implies a strong linkage with the hunger experienced by several students. Figure 8 indicates that over one third of the sample population depends on the pantry as their number one source of food (see Figure 8).

Is the School Street Food Pantry your main source of food?

Yes
32.4%

No
67.6%
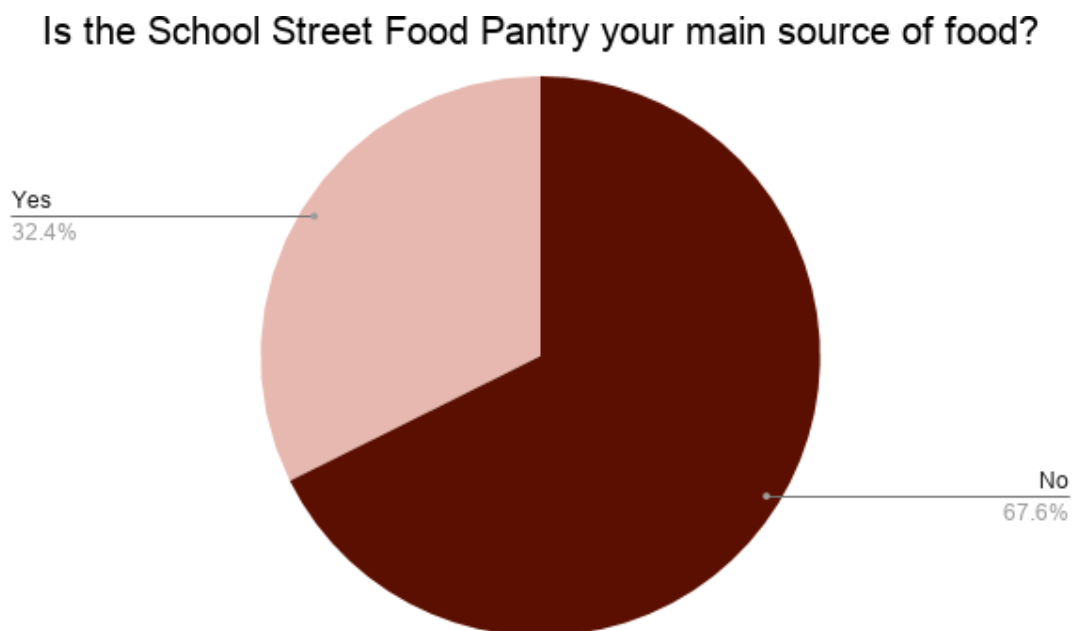
Figure 8. Pantry as Primary Food Source

Amid the limitations to how much patrons can receive at the pantry, this data paints an alarming picture of how some students manage to spread out the food they get from week to week.

Hunger and Food Shortage

 Moreover, when asked "Within the past 12 months, have you been worried you would run out of food and be unable to get more?", over half of the survey respondents asserted that they found themselves worried about being food insecure (Figure 9). The prevalence of this concern among students is underlined even further in Figure 10, as data indicates that 8 out of the 34 respondents were actually unable to get more food when they eventually ran out (see Figures 9 and 10).

Within the past 12 months, have you been worried you would run out of food and be unable to get more?

Figure 9. Food Insecurity Concerns

Within the past 12 months, have you run out of food and been unable to get more?
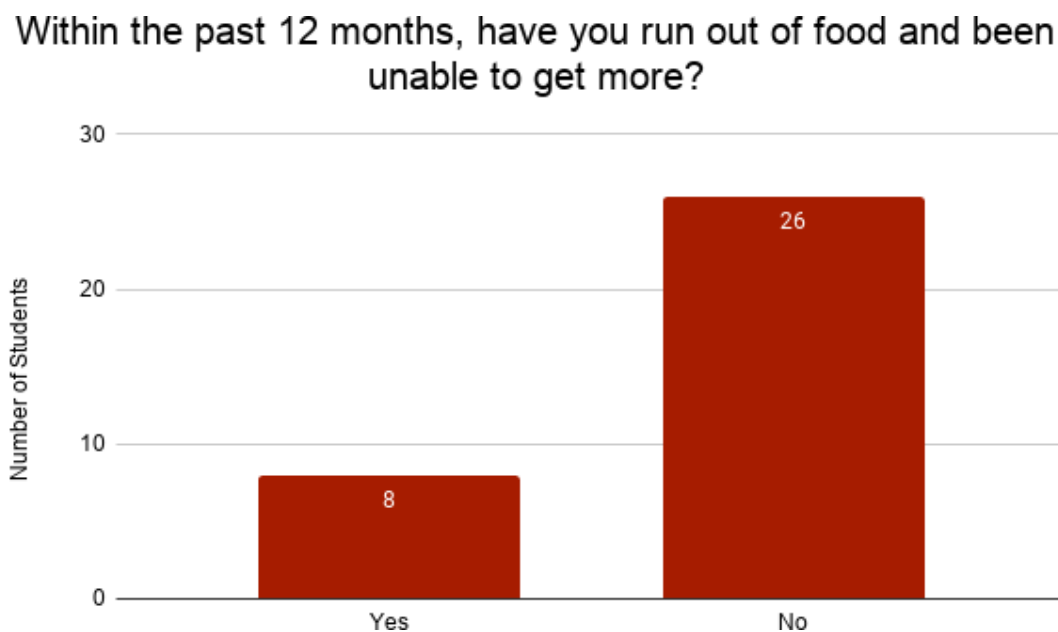
Figure 10. Inability to Purchase Food

Regardless of the limited size of this sample, the extent to which these findings may be applicable to the larger community of pantry attendees is a possibility that can't be ignored in this case. While the reality of hunger is certainly more pronounced for some students than others, it is clearly evident that food insecurity affects a majority of the pantry population in varying degrees. Even though the pantry can only do so much in alleviating these circumstances, it could serve as a foundation for possible directions that can be taken when thinking about grants and

other collaborative relationships that can support students. These findings also further emphasize the impact that the communication of additional resources such as SNAP can potentially have on students who may be struggling more often than not while attending the pantry.

Food and Culture

In total, there were 34 survey respondents who filled out the survey responses based on their personal experience. As the School Street Food Pantry has experienced, and we have observed, the patrons who go to the pantry are of diverse ethnic backgrounds. Of those surveyed, shown in Figure 1, 59% were international students, bringing with them their individual levels of exposure to U.S cuisines.

Only a little over half of those surveyed could confidently say that the pantry met their nutritional needs. For the question, "Do you think that the food at the School Street Food Pantry meets your nutritional needs?", 52.9% responded yes, 32.4% responded no, and 14.7% responded I don't know. There could be multiple factors for why their nutritional needs may not be met. A question that sheds a little light on this topic is, "Have you ever been unable to take specific food items (from the pantry) because of your cultural (religious, ethical) dietary needs?" The responses show again, approximately half of the respondents have encountered this issue (see Figure 11).
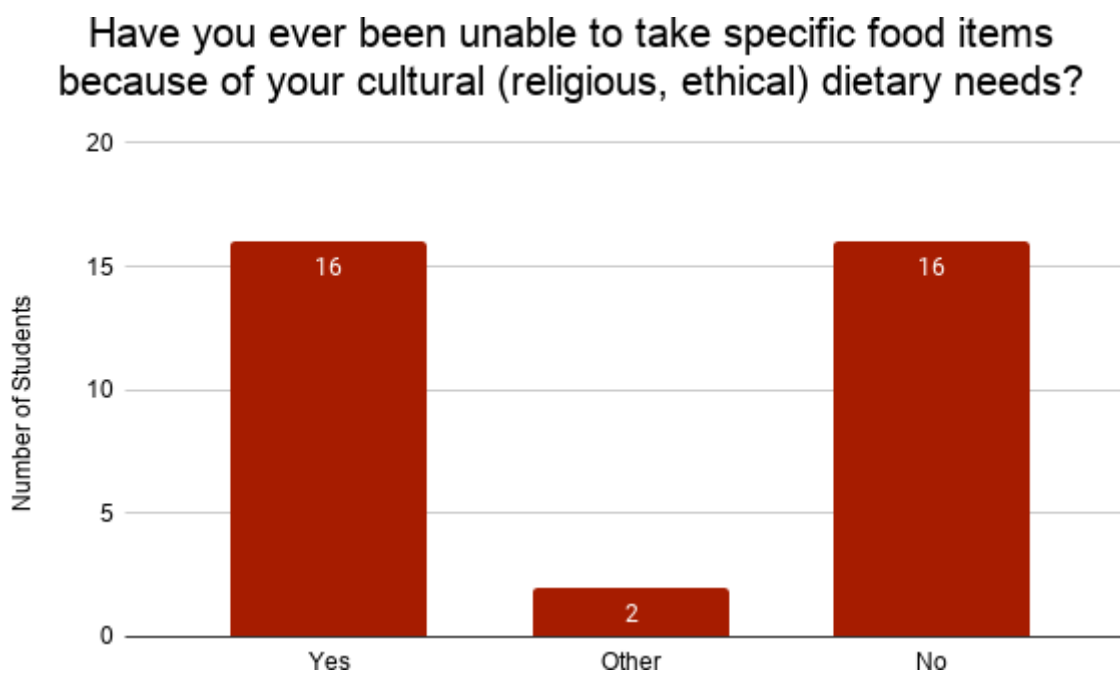
Figure 11. Survey results regarding cultural needs

A large portion of our respondents also revealed that the reason was a result of cultural, religious or ethical issues; one response for allergies, and one response for vegetarianism.

Our sample showed a diverse range of countries patrons are originally from. Below are the written responses (Bangladesh, Brazil, Ghana, India, Nigeria, Pakistan, Russia, Tanzania, Vietnam, and Nepal) (see Figure 12).

International Students: Where are you from?

Figure 12. Survey results regarding country of origin

Something that could be interpreted positively from the survey responses, is that the majority of the respondents do not have others who rely on them for food, nor have children. Combined with information gathered through interviews and focus groups, it seems that the patrons understand the pantry serves a large group of diverse individuals and do not mind visiting another location to complete a cultural dish. The overall feedback about the pantry's services was overwhelmingly positive.

Literature Review for School Street Food Pantry
Spring 2020
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Topic: Food Deserts

Howerton, Gloria and Amy Trauger. ""Oh honey, don't you know?" The Social Construction of
 Food Access in a Food Desert". An International Journal for Critical Geographies, 2017.
 16(4) 740-760.

 In this article the researchers explore how food deserts are racialized spaces and the causes
of these food deserts must be understood in a lens of race as well. Food deserts directly correlate to
racial segregation and are much more likely to be in majority Black areas of the country.
Researchers have found that economic status of a neighborhood can indicate presence of food
deserts and vice versa. Howerton and Trauger looked primarily at two food stores within a food
desert area in Athens Georgia. Athens Georgia is a college town so could be compared to
Bloomington Normal in a way. The two stores they looked at were first a food cooperative and the
second was a convenience store, which focused on Indian foods. Both of these stores were very
racialized places which are primarily serving patrons of one race. The food cooperative serves a
majority white population, even if it is placed in a food desert area. Researchers interviewed non-
white residents of the area around the cooperative, who didn't know of the existence of the
cooperative and many hadn't realized the cooperative sold food. The second area they observed
was a convenience store and there was cliental of many different races but primarily non-white.
This store didn't have the most-healthy selection and had a bad reputation with the neighbors as
being dangerous. There was a narrative of not feeling safe in the store and only going if absolutely
necessary. The researchers found these places were racialized and helped solidify the correlation
between food desserts and racial discrimination as well as economic status. This was also
exemplified by the cooperative members being strongly against a Walmart coming to the
neighborhood which they viewed in a political manner. This Walmart would have helped alleviate
some of the problems of the food desert but again was clearly a racialized and economic lens of
this argument. This research helps shape some of the issues in the Bloomington Normal community
as there is not access to food very close to ISU campus. There are convenience stores and not
access to fresh food as well as access is limited because of economic factors.

Bonica, Mark J. and Kerryn L. Story (2016). "Into the (Food) Desert: A Food Desert
 Simulation". Global Journal of Medical Research: Nutrition & Food Science. 16 (2) 1-11

 This article is about an experiment the researchers did where one subject spent a whole
month only accessing food from a convenience store within walking distance from their house. The
researchers used a very strict definition of food deserts which has many different definitions but is
typically considered to be access to fresh food within one mile of someone's home. The researchers
muddy this water as the definition often is "as the crow flies". Often access to food is actually
further then one mile and those with limited mobility it is much further and more difficult. The
researchers found there were very little health differences with the subject after one month of
exclusively buying food at a convenience. He actually lost weight and had lower levels of
cholesterol but had lower access to certain vitamins and nutrients. Over time this could be very
detrimental to people's health outcomes as there was little access to fresh food. Also, the subject
was put on a strict budget and often went over budget throughout the month. It was also very
difficult for the subject to buy food at a fair price or in bulk. Compared to local grocery stores in
the area the prices of certain items were significantly higher. As people who live in food deserts are
often in a lower economic state, this could exacerbate their problems further. Finally, the subject

often felt pressure to buy food which was unhealthy as it is easier to access in convenience stores. As there are fewer options for healthy foods the pressure to consume unhealthy food is higher. This research has many problems, such as low participation rate and questionable methodology, but shows some of the health outcomes that many college students may be facing. As ISU and ISU housing is usually closer to convenience stores it may be easier for students to go to these types of stores rather than a grocery store which has healthier options which are fresher and often are priced more fairly.

Savacool, Julia (2013). "What It's Like to be Stranded in a Food Desert: Special Report" Women's Health. 10(8) 154-159.

This article gave an overview of different aspects of food deserts and some of the differences between urban and rural food deserts. Some of the major information that came from the article was that food deserts cost the US in worker productivity and health-care costs by 167 billion dollars annually. The original research on food deserts was done in urban areas such as Chicago and showed that entire neighborhoods might not have access to fresh food easily and showed negative health outcomes for large areas of the city. However new research also shows there are big differences in rural areas. In very rural areas such as the Mississippi river delta there are food deserts which are 100 miles or more from the nearest supermarket. This shows that there are extreme differences that face both rural and urban people who live in food deserts. Finally, the researchers presented information which shows that in urban areas there are significantly more fast-food restaurants than grocery stores for every 100 people. For example, in King County (where Seattle is) there are 8.8 fast food restaurants for every 100 people compared to 2.5 grocery stores for every 100 people. This article shows a lot of information about food deserts and how they affect people differently in urban and rural environments.

Topic: Food Insecurity and College Students

Freudenberg, N., Goldrick-Rab, S., & Poppendieck, J. (2019). College Students and SNAP: The New Face of Food Insecurity in the United States. *American Journal of Public Health*, *109*(12), 1652–1658. https://doi-org.libproxy.lib.ilstu.edu/10.2105/AJPH.2019.305332

College students, as a population, are more food insecure than the United States population as a whole. Studies have found the rate of food insecurity among college students range from 20% to 50%, which greatly exceeds the 12% rate of food insecurity that is the average of the United States total population (Freudenberg, 2019). There are many factors that contribute to the high rates of food insecurity amongst college students, Freudenberg and his colleagues identify five in their 2019 study. Essentially, they conclude that students today face more financial struggles than they did historically. Costs and fees of college are higher than ever and continue to rise, yet, federal subsidy programs, such as the Pell grant, have less purchasing power than ever and states are receiving less funding relatively, and therefore students are seeing less funding support for housing and food from their universities. It is also harder today for students to work to cover their costs through college. The value of the minimum wage has fallen and markets are not conducive to part-time, student workers. A student working full-time will barely make enough money to cover costs of a full-time community college education (Freudenberg, 2019).

Welfare reforms of the 1980s and 1990s resulting in stricter standards targeting students in the Supplemental Nutritional Assistance Program (SNAP), the nation's leading effort targeting hunger relief (Freudenberg, 2019). The rules of the program were rewritten so that only full-time students working 20 hours a week are eligible for SNAP benefits, and they were rewritten in a confusing way that may be interpreted as students, as a population, are ineligible. Universities are

beginning to recognize their high levels of hungry students, and many have launched various initiatives aimed at hunger relief. Common initiatives include creating campus food pantries, offering meal vouchers for campus dining, and providing access to information regarding available benefits such as SNAP.

Knol, L. L., Robb, C. A., McKinley, E. M., & Wood, M. (2018). Food Insecurity Is Related to Financial Aid Debt Among College Students. *Journal of Family & Consumer Sciences*, *110*(4), 35–41. https://doi-org.libproxy.lib.ilstu.edu/10.14307/JFCS110.4.35

Many studies have proven the rates of food insecurity among college students are much higher than the national average. Among the general population, food security is linked to income, but the relationship among college students is more nuanced (Knol, 2018). Students finances are complicated; they may have many sources of income such as financial aid, parental support, employment, loans, and credit cards. Knol and colleagues conducted a study in 2018 to evaluate the relationship between finances and food security for college students. They evaluated many factors, including demographics and level of income, and found that the most significant indicator of level of food security is amount of financial aid debt; essentially, financial aid debt is tied to food insecurity. "When financial aid debt was $10,000 or more, students were at higher risk for food insecurity than students with less than $1000 in debt" (Knol, 2018). The authors also found that exogenous financial shocks such as natural disasters, and usage of food assistance programs are also indicators of food insecurity.

Knol also highlights a limitation of this study and an overall issue with the food security scale. The scale "does not capture all dimensions of food insecurity such as food safety, nutritional status, or access to community resources such as grocery stores, food pantries, and food banks" (Know, 2018). Also, the temporal element of the scale can lead to discrepancies. The scale indicates status of food security over the past year; level of food security can change rapidly and extensively over that time frame, so the reported levels may not be truly representative.

Mirabitur, E., Peterson, K. E., Rathz, C., Matlen, S., & Kasper, N. (2016). Predictors of college-student food security and fruit and vegetable intake differ by housing type. *Journal of American College Health*, *7*, 555.

Past studies on college-student food security have demonstrated trends and patterns amongst students and levels of food insecurity. Research has found students living alone or with roommates have lower food security than those living with parents. Additionally, studies have found patterns amongst races/ethnicities, but no significant differences between genders. Equally well documented is the issue of nutrition among college students; "US college students do not meet the recommendation to consume 5 or more daily servings of fruits and vegetables (FV)" (Mirabitur, 2016). A 2016 study sampled 514 students from a public university to examine relationships between student characteristics- including socioeconomic demographics and car and housing access- food security, and FV intake (Mirabitur, 2016).

Their findings suggest students with low food security ate significantly less FV servings than highly food secure students. They also found that students living in housing with food provision, such as a dorm with access to a dining hall or a catered sorority house, intake more FV servings than students living in housing without food provisions. Additionally, they found being male or lacking car access has a significant negative effect on FV intake in college students. Fruits and vegetables "have the highest cost per calorie, it is possible that FV intake is more sensitive to changes in food security" (Mirabitur, 2016). It is possible that a college student facing food insecurity may pick foods with higher calories for their price, potentially compromising prioritizing nutritional value. This study offers University-based initiatives to rectify this issue, such as establishing food pantries and establishing campus gardens and farms.

Topic: Food Pantries and Universities

Some general things to take away from the three articles below: the percentage of college students who experience food insecurity is greater than the percentage of household that experience food insecurity in the general population; graduate students, and college students as a whole, are a generally overlooked population when it comes to discussions on food security/insecurity; there is no comprehensive measurement of food insecurity on college campuses; food insecurity and food assistance programs are becoming more talked about on campus and in research, this will help with the stigma associated with each; and receiving SNAP does not mean that college students are food secure.

Henry, Lisa. "Understanding Food insecurity Among College Students: Experience, Motivation, and Local Solutions". Annals of Anthropological Practice, 2017. 41 (1) (6-19).

There is very little data that exists on food insecure college students. According to Feeding America, 18.7% of households that used food service programs from 2012-2013 had at least one adult student in them (Henry, 2017). While this number addresses households and the students in them, it does not address the percentage of food insecure college students while they are away at school. Studies of food insecurity on college campuses report a wide range of students, 14%-59%, being food insecure at one point or another during their college career (Henry, 2017).

This article addresses the meaning and experience of food insecure college students, the impact food insecurity has on academic performance and motivation, and participant suggestions for methods to address food insecurity on a local level. Lisa Henry, a Professor of Anthropology at the University of North Texas (UNT) conducted an ethnographic, exploratory study that included 27 semi-structured interviews and five focus groups with food secure and insecure UNT students. From the study she found that there was a general consensus among both food secure and insecure students that campus solutions to food insecurity need to be discreet in order to protect student confidentiality and reduce the stigma of food insecurity on campus. This can be done by increasing the awareness and visibility of the issue on campus. This would help create a more accepting campus community that would allow for food insecure students to reach out for help more frequently. Henry calls for more research on the factors contributing to food insecurity, its impact on academic success, its impacts on physical and mental health, and the experience of food insecurity (Henry, 2017).

Miller, Michael; Middendorf, Gerald; Wood, Spencer; Lutter, Sonya; Jones, Scott; and Lindshield Brian. "Food Insecurity and Assistance on Campus: A survey of the Student Body". Online Journal of Rural Research & Policy, 2019. 14 (2). 1-25.

Recent studies of food insecurity among college students finds that 34%-59% of college students are impacted by food insecurity. This number will only continue to rise as tuition prices increase and more low-income and first-generation students begin their college careers (Miller et al., 2019). The fact that close to 52% of college students live at, or near, the poverty level means that college students are forced to make difficult decisions to hopefully meet their housing, education, and nutritional needs.

A team of researchers from Kansas State University (KSU) conducted a study composed of both undergraduate and graduate student participants. Their survey was based on the USDA short term food insecurity questions (used in our survey as well). They found that 44.3% of respondents at KSU had experienced some form of food security during a 7-month period in the 2016-2017 academic year (Miller et al., 2019). A percentage consistent with the national range of 34%-59%.

This high percentage of food insecure college students does not match with the low percentage of students who seek food assistance. Only 4% responded stating that they sometimes or often used food assistance (Miller et al., 2019). This distinct difference in the percentages could be explained by the stigma associated with food insecurity and needing assistance or the general attitude against seeking out assistance (Miller et al., 2019).

Cady, Clare and Carol Cutler White. "Food Pantries on Campus to Address Student Hunger". New Directions for Community Colleges, 2018. 184. 73-82.

This article addresses how campus leadership and student organizations can support food insecure students and better address the food insecurity issues on college campuses by establishing a food pantry accessible to college students. This article provides some best practices on establishing a campus food pantry but does examine some of the factors that contribute to food insecurity on college campuses. A 2017 study of 30,000 community college students by the Wisconsin HOPE Lab provides some of the statistics cited in the article Goldrick-Rab et al., 2017). Housing security/insecurity is one area that is connected to food insecurity. Many college students who experience food insecurity report that they also experience some level of housing insecurity (77%) or even homelessness (23%) (Cady and Cutler White, 2018). A telling portion of the article titled "Doing What We Ask Them To", contradicts the assumption held by some that college students are not doing enough to make ends meet. Some of these assumptions may center around the true cost of college tuition, the type and amount of financial aid available to students, and how much income is generated by low-paying jobs (Cady and Cutler White, 2018). This article concludes that addressing food insecurity and providing assistance for food insecure students is part of the, "overall support system that increases the likelihood students are retained and complete their degrees or certificates" (Cady and Cutler White, 2018).

Topic: Food Insecurity

Hickey, Amanda, et al. "Perceived Hunger in College Students Related to Academic and Athletic Performance." *Education Sciences*, vol. 9, Jan. 2019.

Contrary to prior literature that primarily analyzed the percentage of college students that experienced food insecurity, this study explores food insecurity even further by assessing whether it has an impact on the academic and athletic output of students at a liberal arts college in New Hampshire. In order to do so, the quantitative study utilized a self-reporting survey to measure how both students and athletes personally evaluate their hunger, while gaining insight on the preferred methods they use (or do not use) to address and offset such hunger. As a means of specifically highlighting the relationship between this perceived hunger and academic outcomes, students self-reported their GPA and athletes reported on their athletic performance, which were then paired alongside their responses to survey questions about how often they felt hungry.

Ultimately, those students who self-reported hunger had lower GPAs that were between 2.6 and 3.0, while the remainder of students that didn't self-report hunger typically had GPAs between 3.0 and 3.5. Of the athletes that self-reported hunger, about one-third also demonstrated similar results, revealing that their athletic performances in both games and practices were affected as a consequence of their lack of food. The routines of college students can be extremely demanding and may be even more difficult when accompanied by hunger. This research shines a glaring light on how food insecurity can potentially cause distractions for students while they try to maintain focus in their specific environments of work. This study emphasizes the notion that hunger among students is more than just a percentage; perhaps more importantly showing policy makers and public officials that hunger, and a student's ability to address it, plays an influential role in

impacting whether they succeed or fall short academically and athletically over the course of their time in school.

Morris, Loran Mary, et al. "The Prevalence of Food Security and Insecurity Among Illinois University Students." *Journal of Nutrition Education and Behavior*, no. 6, 2016, p. 376.

Universities on the East and West coast of the United States are most often seen among the existing studies that have examined levels of food insecurity. Conversely, the topic of food insecurity has not been intensively observed on college campuses in the Midwest, particularly in Illinois. By capturing a snapshot of the prevalence of hunger across 4 different Illinois universities (Southern Illinois, Northern Illinois, Western Illinois, and Eastern Illinois), this analysis on food insecurity presents research within a different geographical context that may have not been accounted for otherwise. Food insecurity in this study was measured with the Household Food Security Survey Module (HFSSM), which measures hunger on a detailed scale of high to low food security.

Across each of the 4 universities, similar food insecurity percentages were found in each of the 4 food security levels. Aside from food insecurity's impact on academic standing, the researchers also underlined the differences in food insecurity between historically disadvantaged groups and their counterparts. It was clear that a greater number of African American/Black students had less high food security and more very low food security, while a high number of white students self-reported having high food security greater times than Black students. As it pertains to food insecurity and its association to the academic standing of each Illinois university sample, students with a lower GPA status experienced significantly less high food security while those with a higher GPA experienced significantly greater high
food security.

Despite limitations around the representativeness of certain characteristics within these samples, it remains consistent among previous studies that the higher a student's GPA, the more likely they are to experience less food insecurity, which points yet again to the power that hunger can have over a student's ability to think and perform within a university setting. Moreover, the results of this analysis indicated that the characteristics of a student, such as race, socioeconomic status, and academic standing, are all connected in varying degrees when determining whether an Illinois college student may be food insecure or not.

Meza, Anthony, et al. ""It's a Feeling That One Is Not Worth Food": A Qualitative Study Exploring the Psychosocial Experience and Academic Consequences of Food Insecurity Among College Students." *Journal of the Academy of Nutrition and Dietetics. Academy of Nutrition and Dietetics*, vol. 119, no. 10, Oct. 2019, p. 1713–1721.e1.

Taking a quantitative approach toward the topic of food insecurity is typically utilized because it paints a statistical picture of how vast the issue really is. This picture may, in some cases, be coupled alongside an emphasis on the urgency with which further action must be taken. However, the qualitative approach taken by this research study brings a more intimate perspective to the problem of hunger on college campuses, while addressing the causes of food insecurity with greater detail as well. In a focus group of 25 students at the University of California, Berkeley, insight is gained concerning the trade-offs that students often make when deciding to make the fulfillment of their hunger secondary; especially when faced with the pressure of focusing on their schoolwork with an empty stomach; feeling embarrassed about missing out on social events involving food because of their lack of money; and the fear of disappointing their parents, among a number of other turbulent psychosocial effects taken into
account by the researchers.

The discussion around the stress that food insecurity caused and at times escalated, was

observed in numerous ways from one student to the next, which can only lead one to imagine how similar such stories may sound across other universities. Students expressed consistent levels of frustration, hopelessness, and even anger because of the frequency with which they didn't have enough energy to take their schoolwork as seriously as they should; as seen in several students who either switched majors, contemplated dropping out, or studied less in order to work a job that paid for their food outside of housing, tuition, and other expenses. This is the unfortunate reality of countless university students across not only this specific campus, but across the United States as well. Food insecurity being explored from the qualitative lens highlights what generalizable numbers usually fail to accentuate. This study reveals a
telling story—one that pits students between a world of difficult choices that usually results in a hungry, energy-deprived student.

Topic: Measuring Food Security

Soldavini, Jessica & Berner, Maureen & Silva, Julia. (2019). Rates of and characteristics
      associated with food insecurity differ among undergraduate and graduate students at a
      large public university in the Southeast United States. Preventive Medicine Reports. 14.
      100836. 10.1016/j.pmedr.2019.100836.

        This article aimed to estimate the prevalence of food insecurity and identify characteristics associated with food security status separately for undergraduate and graduate students. The relevance of this study to our research is how it analyzes undergraduate and graduate students comparatively. There is plenty of scholarship on food security among college students looking only at the undergraduate student experience. The articles do include graduate students typically group graduate and undergraduate students together. In looking at graduate and undergraduate students separately like with the School Street Food Pantry (SSFP); we can have a better understanding of the best strategies to address food security for each group.
        The researchers conducted a cross-sectional analysis of 4819 students from a public flagship university, the University of North Carolina. The participants completed an online questionnaire assessing their food security status for the past 12 months before taking the survey. The survey chosen for this study comes from the 10-item US adult food security survey module. The goal with the survey was to calculated frequencies of food security categories and used multinomial logistics regression to assess the association between food security status and student characteristics.
        What the study found is that Undergrads more likely to experience food insecurity. Food security rates were 25.2% for undergraduates and 17.8% for graduate students. The characteristics found to be associated with food security status for undergraduates were gender, year in school, receipt for financial aid, cooking frequency, perceived cooking skills and having a meal plan. For graduate students the characteristics associated were age, marital status, having dependent children, enrollment status, and body mass index. Both groups shared included race/ethnicity, perceived health, international student, and employment status as associated characteristics. These are important sub-categories for the SSFP to consider as they continue providing services and conducting research.

Barrett, Christopher. (2010). Measuring Food Security. Science (New York, N.Y.). 327. 825-8.
      10.1126/science.1182768.

        In this research, Christopher B. Barrett aimed to improve food security measurement by evaluating previous research done on food security, the history of measuring food security and analyzing areas of evolution for the future of the study. In 1996 the food work summit defined food

security as a situation that exists when all people, at all times, have physical, social and economic access to sufficient, safe and nutritious food that meets their dietary needs and food preferences for an active and healthy lifestyle. Having grocery stores is an important step, but just that, a step in the right direction. There are other factors that we must consider like how people are getting to the grocery store; can they afford enough groceries for the size of their family and is the food available meeting their dietary needs? Three pillars of food security provided in the reading are: Availability, Access and Utilization; in that order. Is there food available to you where you live, can you easily make it there and back with the amount of groceries needed for your household, and is the food consumed/nutritious enough?

There are many factors that contribute to food security, so analysts use proxy measures for different aspects of food security. A very common tool for conducting these studies are surveys and an area where Barrett chose to focus on. The purpose in using surveys when measuring food security is to target individual characteristics that help measure the depth of the three pillars (Food security interventions, observational data and national level measures etc.). Surveys can work as tools to find patterns and trends.

Many people worldwide are living in poverty but, for the world to continue making progress in fighting for food security, the terminology needs to match across the board. Many studies have not made the distinction between undernourished, undernutrition or food insecure. It is important to know there is disconnect and overlaps in order to properly understand the global experience. Many cases in the topic of hunger are caused by disasters, floods, wars and/or poverty. Chronic poverty being the number one culprit but, the effects may also be seasonal and irregular. The same idea can be applied to observing college students, not only what are the causes but is there a pattern throughout the year?

This study breaks down why safety net programs are important. When talking about food security, delays are deadly and expensive. Therefore, the quality of targeting of vulnerable subpopulations is so important. Effective targeting and understanding the causes of their specific cases of food insecurity are vital and help save lives. The greatest gains in the fight for food security are made through policy changes. Having proper measurements lead to factual diagnoses and adequate responses for the specific cases of food insecurity. Food security being a time sensitive matter, moving towards preventative measures is key. The author suggests three areas where the evolution of this research can go. 1) Conducting more longitudinal studies to follow global trends, 2) Gain a better understanding of predictive measures to more effectively put in place preventative approaches, 3) Establishing a global network that uses a standardized core survey and when we get through the first two steps we can more effectively move on to preventative measures.

The SSFP deciding to participate in this study is a huge first step. Moving towards longitudinal studies and keeping up with global or university trends is the next step. The work that SSFP is doing can have a real influence in ISU and Illinois policies if shared through the proper channels.

Soldavini, Jessica & Berner, Maureen & Silva, Julia. (2019). Rates of and characteristics associated with food insecurity differ among undergraduate and graduate students at a large public university in the Southeast United States. Preventive Medicine Reports. 14. 100836. 10.1016/j.pmedr.2019.100836.

This article is assessing and measuring the appropriate measurement for food security. The goal of this research to aid the process of evaluating and targeting food and economic aid/policy. By 1945 the idea of 'food' security', usually referred to as efforts of fighting hunger, was agreed upon as a basic human right. There are many ways to measure food security and the government began measuring national food security before there was a word for it, after WW1. The researchers conducted a literature review to identify peer-reviewed journal articles that reported explicit and

empirical measurement of food security. This reading taught me that the process of measuring in a food security study can mean several different things, and they do not necessarily cancel the other out.

In this article the researchers prepared a compendium and review of food security assessment tools.

Measurement tools
1) Provide national-level estimates of food insecurity
2) Inform global monitoring and early warning systems
3) Assess household food access and acquisition
4) Measure food consumption and utilization

Some of the terminology, and important distinctions, for this type of research includes under nutrition, hunger, food security and nutrition insecurity.
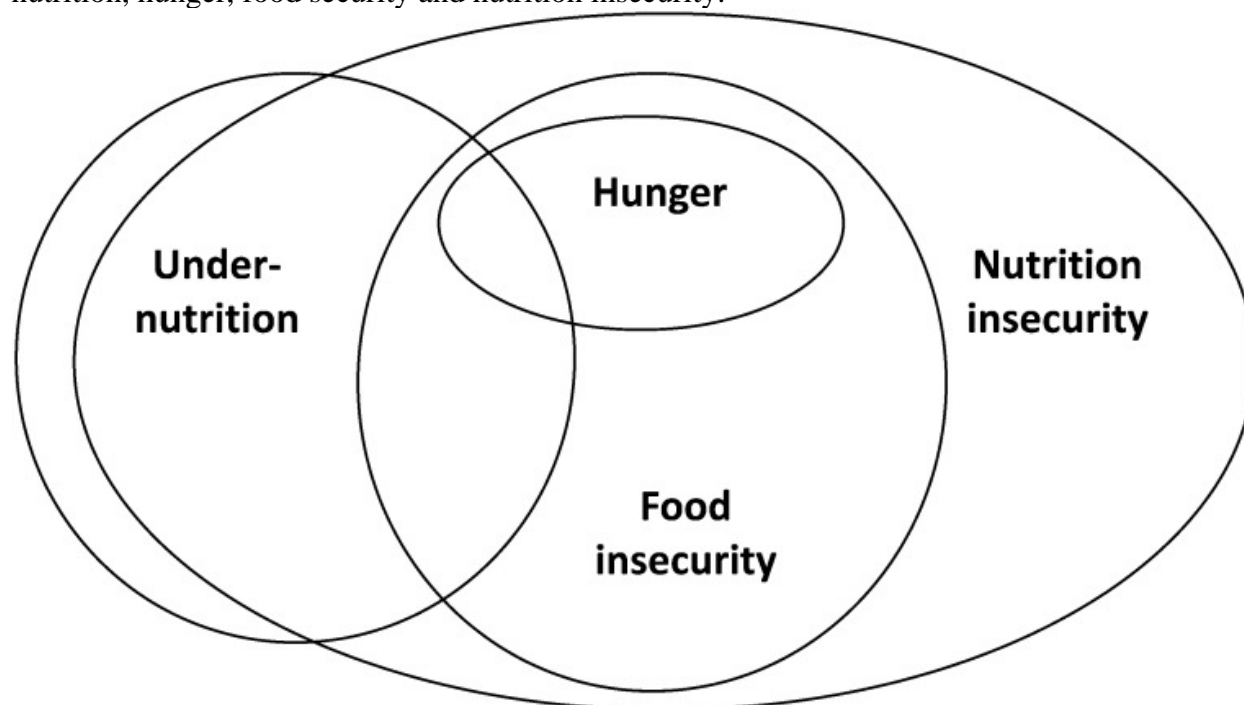
Nutrition insecurity considers care, health, hygiene practices in addition to food security, where hunger and undernutrition do not. The important take-away being that there is more than one way of measuring this idea of 'food security'.

· Food balance sheet data: total quantity of calories in forms of food produced or imported into the country (looks at availability of food)
· Availability at all times (physical and economic access to food)
· Collective approaches-expenditures in women compared to men favored investments in health, nutrition and education
· Utilization- Diet quality and consumption
· Measurement-national, regional, household and individual

The research for food security has seen major strides in recent years, especially when talking about college students, but there are still areas for growth. The authors acknowledge this by addressing the questions that reading this article raises. The authors also present the questions that researchers must ask themselves when conducting research on food security. This is one of the most important sections of the reading that I believe we should be able to answer in order to successfully conduct our research with the School Street Food Pantry.