

ALL DRESSED UP WITH
NOWHERE TO
GROW: PERCEPTIONS OF
COMMUNITY GARDENS AND
FOOD SECURITY ON
DALHOUSIE SEXTON CAMPUS

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Executive Summary

Food insecurity is a pressing issue in Canada. Amongst the groups most affected by food insecurity are university students. The Government of Canada describes food insecurity as the inability to have an adequate diet, or the lack of food deemed necessary by societal standards (2020). While there are many groups which are food insecure our study is aimed towards food insecurity amongst Canadian university students, particularly those on the Dalhousie University Sexton campus. A main objective of this study was to learn if there was a desire for a community garden on the Sexton campus, and to assess the level of participation in a proposed community garden. Our study used an online survey to receive responses from participants on their perceptions of and interest in a community garden as well as their experiences with food insecurity. Posters were placed on Sexton campus from March 16th to March 31st, 2023, with a sample population target of 100 respondents. We received 50 responses, with limitations including a small population size and responses that were invalid for our study. We found that 1/3 of surveyed students self-identified as food insecure, and that 50% of respondents would participate in the proposed community garden if it was implemented. These results suggest a significant amount of interest and community engagement for potential community garden implementation. Further, we did not find ties between willingness to participate in community gardens and levels of food security. This may be due to lack of available time due to responsibilities carried by food insecure people. Our recommendations for further action are: to obtain more qualitative information through interviews, carry out research on a larger sample size, and access existing community gardens to assess the levels of engagement.

Introduction

The focus of our research was to investigate food insecurity on Dalhousie Sexton Campus, specifically food insecurity as it pertains to the accessibility of fresh produce for undergraduate students on Dalhousie Sexton campus. Our research question was “What are Sexton campus undergraduate students’ perceptions on the creation of a community garden on campus?” A community garden, as described by the American Community Garden Association, is “a place that can be urban, suburban, or rural. It can grow flowers, vegetables, or a community.” (Lovell et al., 2014) The main goals of our study were to:

- a) gauge the knowledge of undergraduate students on food insecurity and the associated resources
- b) investigate student perceptions of a proposed community garden on campus.

As part of our research, we conducted a study on the Dalhousie Sexton campus, to investigate undergraduate student perceptions of a community garden that we intend to propose on the campus. To diligently investigate this, we utilized stratified random sampling, a probabilistic sampling method. Food security is an issue among students in universities and it can be defined as “a state of having reliable access to enough affordable, nutritious food. (The World Bank, 2023) Our hypothesis was: undergraduate students are experiencing food insecurity which can be improved by access to a community garden to provide students with fresh produce. One of the goals of this pilot study was to reveal whether there was interest in the creation of a community garden on the Dalhousie Sexton Campus.

The reason that we believe the creation of a community garden is so important is because according to research completed in 2012 by Minnick Hanson at the University of Central Florida, community gardens have impacts on dietary choices along with physical and mental health (Minnick Hanson, 2012). One of the goals that we hope to accomplish as a by-product of the creation of a community garden is the improvement of student well-being in terms of dietary choices, physical, and mental health. Further, according to Hanson’s research, which involved interviews with both community garden participants and leaders, the biggest barrier faced was community participation. Therefore, one of our goals was to evaluate whether community participation is a barrier to our community garden proposal.

One of the main benefits of a community garden is the high social engagement factor, this benefit can improve community relationships through; a) providing a sense of belonging, b) a social identity, and c) a sense of fulfillment (Garside et al., 2014). One of the disadvantages of community gardens is that there can be increased health inequality for those that do not have access to the garden (Garside et al., 2014). It is our hope that our research can increase social engagement and health equality on Sexton campus through the provision of fresh produce, and to avoid the negatives we intend to make the community garden visitor and volunteer friendly.

Although most universities have students that experience food insecurity, this issue is not fully addressed. The majority of efforts by universities are to establish a food pantry and although it has shown some success in bridging the gap between students that are experiencing food insecurity and access to nutritious food the limitations on a food pantry are; a)they may be inconveniently located , b) they may have limited hours and c)they could be closed on holidays or between semesters (McCoy et al., 2022). Our study on the perception of a community garden on sexton campus is important because it provides an alternative source of food security to students.

Methods

Study Design

We used an anonymous survey to collect responses from our sample population which gave us student perceptions of community gardens and food insecurity. To do so, we created posters providing a QR code to our study and distributed them across Sexton Campus to promote our study. Our study allows for anonymous responses and contains questions that screen for respondents that qualify within our target sample population. With a target of 100 responses, we then completed quantitative analysis using excel to compare responses from each question and used thematic coding to analyze our results qualitatively.

Information collection

To collect information for our study, we used an anonymous survey for participants to share their responses with confidentiality in mind. Google Forms was used to create the survey, titled “Student perceptions of community gardens and food security”. These survey questions can be seen in appendix A. We were aiming to target a certain demographic with this study. Therefore, screening questions were used at the beginning of the survey, such as: are you an

undergraduate student at Dalhousie University, and what is your year of study. To provide anonymity to respondents, no personal information was collected for this survey. At the beginning of the survey, a confidentiality agreement must be agreed upon to proceed to respond to the survey questions. The confidentiality agreement can be found in Appendix D.

The online survey sampling method uses probabilistic stratified random sampling. This type of sampling will give us a diverse and well-defined population. Students of any year or major were able to respond to the survey, we aimed to have most respondents take at least one class on the Sexton campus in order to provide proportional and stratified responses from this subgroup.

Survey Question Procedure

Questions for the survey were determined by the researchers, through consultation and critical analysis of the research topic. The questions were reviewed under three rounds of editing and consultation of other studies, including publications by Aftandilian & Dart (n.d.), Akiba et al. (2012), and Pothukuchi & Molnar (2014). These publications contained in depth and informative method sections that aided in the creation of our own methods. Questions were also reviewed by Dr. Carolyn Franklin and Celia Konowe, who assisted in each step of the study process. All survey questions used in the survey can be found in Appendix A.

The survey questions aimed to collect a broad scope of information on student perceptions of food insecurity and community gardens. We hoped to obtain information about perceptions and experiences (or lack thereof) with food insecurity as an undergraduate student. Our questions also aimed to judge if there would be an interest in the creation of a Sexton campus community garden. Samples of questions asked includes perception of community garden impact of campus food security, interest in volunteering at the garden, interest to access a community garden for fresh produce, prior knowledge of community garden impacts, and motivations/barriers to community garden participation.

Participants and recruitment

The participants chosen for this study were students attending courses on the Dalhousie Sexton Campus (Halifax, NS). The exclusion of participants were individuals that were not students attending Dalhousie University and located on Sexton campus, which is applicable to students in attendance on the Studley and Truro campuses, as these campuses were not included in our study scope.

The survey was available to participants via the Survey Poster (Appendix C) between March 16th to March 31st, 2023. This time frame was chosen as classes run regularly between these dates; the survey was visible to students present on Sexton campus. Our target number of responses to the survey was determined using the sample size calculator, with a confidence level of 95%, a margin for error of 5%, and an estimation of 135 students to notice our survey posters within the survey accessible time frame, we calculated our sample size to be 100.

Measurement Justification

A survey was deemed the most appropriate method of data collection for our study due to its capability to gather our desired sample size of responses within the time frame our survey was available. The simplicity of a survey is applicable to the fact a community garden had not previously been proposed for the Sexton campus. Only initial impressions were required to determine interest and current perceptions before further in-depth analysis for future studies.

Comparative to an interview, a survey was chosen for faster information collection and initial perceptions from the campus community. This is the first study done on community gardens at Sexton Campus, with the purpose was learn if there was interest of a garden and knowledge of the of impacts community gardens on food insecurity. If this study found any promising interest or results worth further investigation, more in depth measurements of data collection, such as an interview, would be appropriate.

Similar ideas for choice of a survey over an interview were found for census data collection. This method is a long process and can take longer than our study length to collect data, and it is unlikely to receive appropriate and constructive census responses due to time consuming questions when compared to a survey that may only take a few minutes.

Quantitative Analysis

To analyze our data quantitatively, excel was used to compile and quantify responses to yes/no questions and categorical questions in our survey. Responses from the survey were offloaded from Google Forms into excel and organized into a table. Responses to categorical, yes/no, and multi-response questions were quantified using functions on the application, and turned into figures, as seen in the results section. These figures can visually quantify singular responses and compare responses to different questions to find trends common themes between respondents. All results shown from quantitative analysis are cumulative and are anonymous to survey respondents.

Qualitative analysis: Thematic coding tree

In the survey (Appendix A), the respondents were given the opportunity to write a short response to question seven, “are you aware of other benefits of community gardens excluding contributing to food security?”. To analyze our results responses were read for familiarity and to recognize similar themes/categories. We then used themes/categories and created five codes through inductive reasoning by analyzing the type of responses and the frequencies of each theme. All codes were developed directly from responses to survey question 13 (Appendix A). This was achieved by highlighting certain words or phrases in responses that expressed a perceived benefits of community gardens, for example, “increased bee populations”. The responses were compared to one another to identify the differences and similarities within themes. The five codes were colour coded as follows: community building (blue), sustainable food source (green), environmental education (yellow), wellbeing (orange), and environmental impact (purple). A variety of different types of benefits appeared under each of the five main codes. Sub codes were created to organize the different types of responses under the main codes, creating a hierarchal category system. Figure 8, the sub codes are: friendships/connections, aesthetics cause increased community care, volunteer opportunities, lowers carbon footprint, affordable, local, new skills, greater knowledge, physical activity, connection to environment, fun, community wellbeing, individual wellbeing, carbon sequestration, climate change resilience, increased biodiversity. To create the coding tree, the Adobe Program Figma was used.

Method limitations

Our methodology was limited by a small population size, this diminished the responses that our survey would receive. Due to the limited time frame that potential respondents had access to the survey, and the accessibility of the survey trying to be limited to students attending courses on the Sexton campus, it proved difficult to reach our target response sample size. We do not expect this smaller sample size to skew our results for the study, as the survey was accessible for a variety of ages and programs to complete.

There is a margin of error that must be considered due to posters promoting the survey to Sexton campus students. This method was accessible for anyone that visited Sexton campus to fill out. This allows for potential responses that may not be from the correct sample population, or people may lie about fitting our participant demographic when completing our survey.

For some survey questions, we received invalid responses that could not be counted, and therefore the number of responses included in the results will be lower. The number of responses

to each question is included in the figure captions. This is a formatting limitation of our study, as some questions had multi-select options where only one option should be chosen, or written responses contained non-applicable content for the study.

Results

Using Excel to complete and present figures of our quantitative analysis, and Figma to present our qualitative analysis, the results of our survey found that most respondents had not experienced food insecurity at Dalhousie University, Sexton Campus. Most respondents were interested to a degree in volunteering at a proposed community garden on Sexton Campus. We received 50 responses to our survey that were included in our analysis and results.

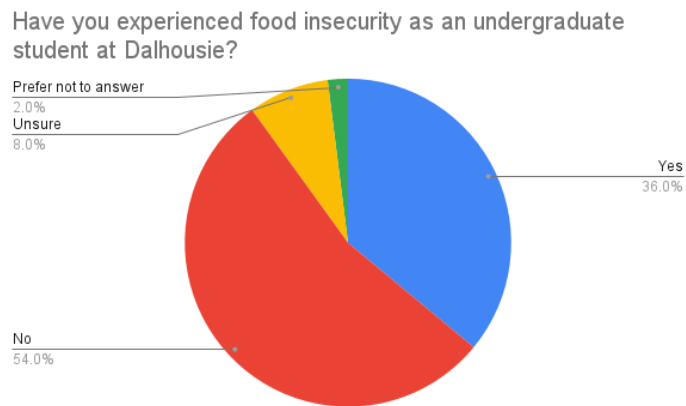


Figure 1. Responses to survey question: “Have you experienced food insecurity as an undergraduate student at Dalhousie (University). Options of response: Yes, no, unsure, and prefer not to answer.

Figure 1 shows that 36% of the total sample population has experienced food insecurity as an undergraduate student at Dalhousie. Contrastingly, 54% of the total sample population have not experienced food insecurity as an undergraduate student.

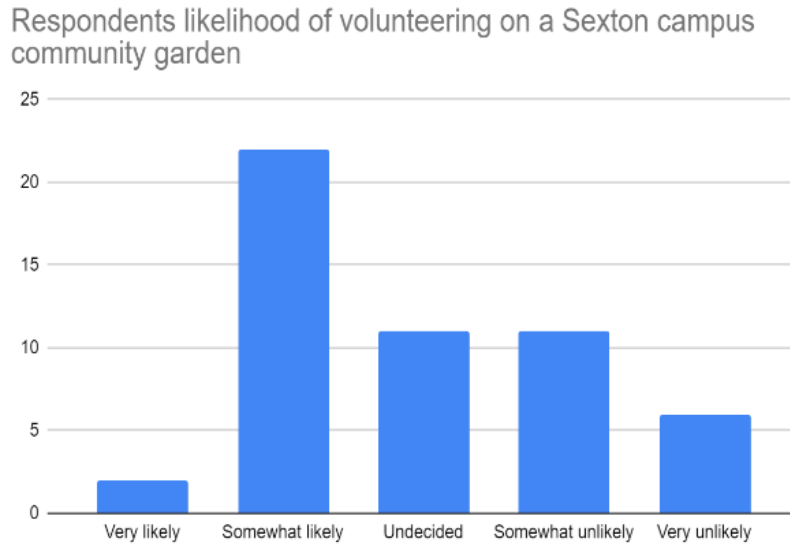


Figure 2. Count of the respondents and their likelihood of volunteering on the Sexton Campus community garden. Respondents had the category options of: Very unlikely, somewhat unlikely, undecided, somewhat likely, and very likely.

Approximately 50% of the total population said they would volunteer at a community garden on Sexton campus as displayed in Figure 2.

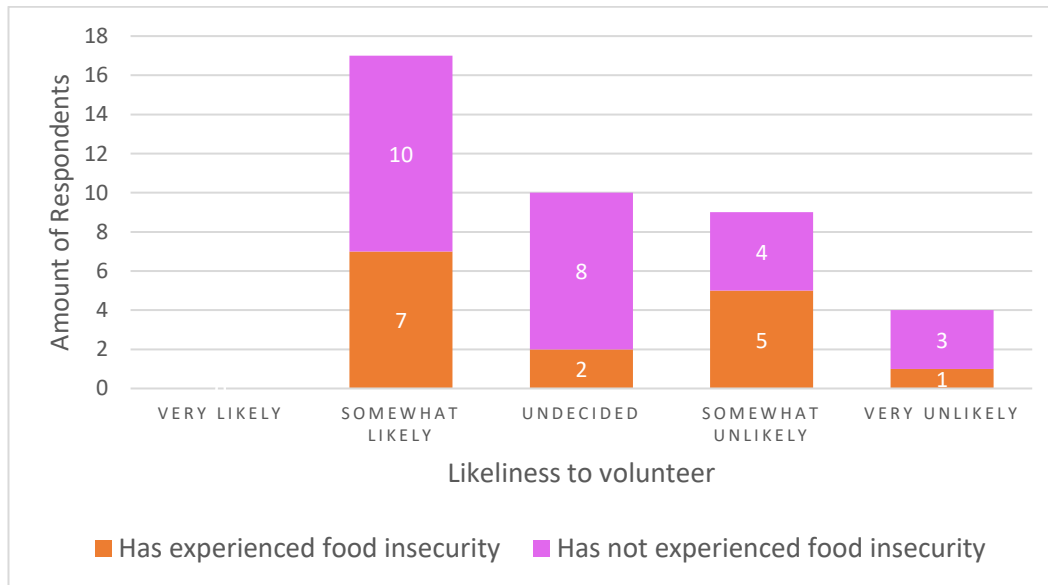


Figure 3. The likeliness of students to volunteer at a community garden on Sexton campus, displaying the responses of food secure versus food insecure students. 40 Responses were categorized into: Very unlikely, somewhat unlikely, undecided, somewhat likely, and very likely.

Figure 3 shows ‘food insecure’ and ‘food secure’ respondents (90% of total sample population), eliminating respondents who are ‘unsure’ or preferred not to answer whether they

have experienced food insecurity as an Undergraduate student. This was done to assess whether respondent's experiences with food insecurity impacted their likeliness to volunteer.

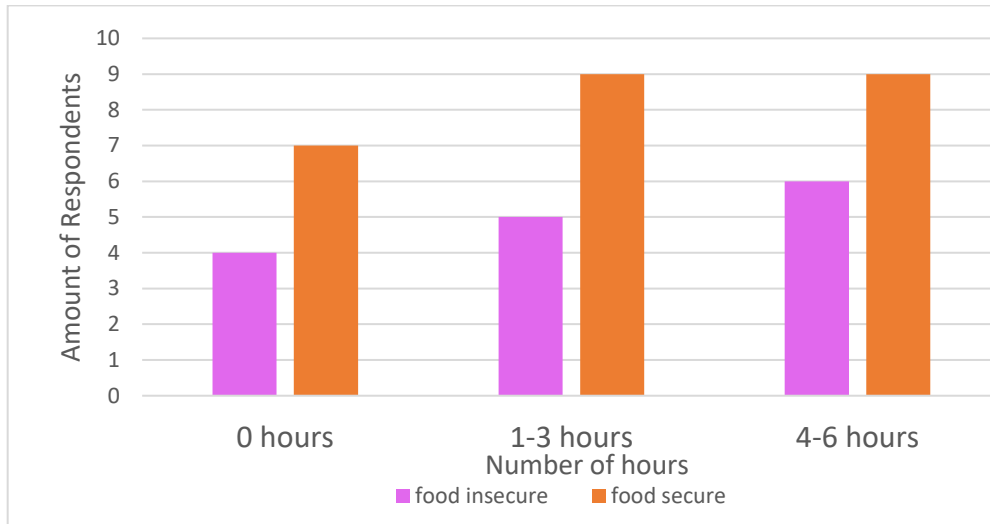


Figure 4. The number of hours respondents would volunteer at a community garden on Dalhousie University Sexton campus. Number of hours options are 0 hours, 1-3 hours, and 4-6 hours, contrasting between food insecure and food secure respondents for each category.

Figure 4 shows the number of hours each respondent would dedicate to volunteering at the community garden on Sexton campus per academic term. 54% of the total sample population self-identified as 'food secure', 36% as 'food insecure'. 9 'food secure' respondents would volunteer between 1-3 hours per term and 9 'food secure' respondents would volunteer 4-6 hours per term. 5 'food insecure' respondents would volunteer 1-3 hours per term and 6 'food insecure' respondents would volunteer 4-6 hours per term.

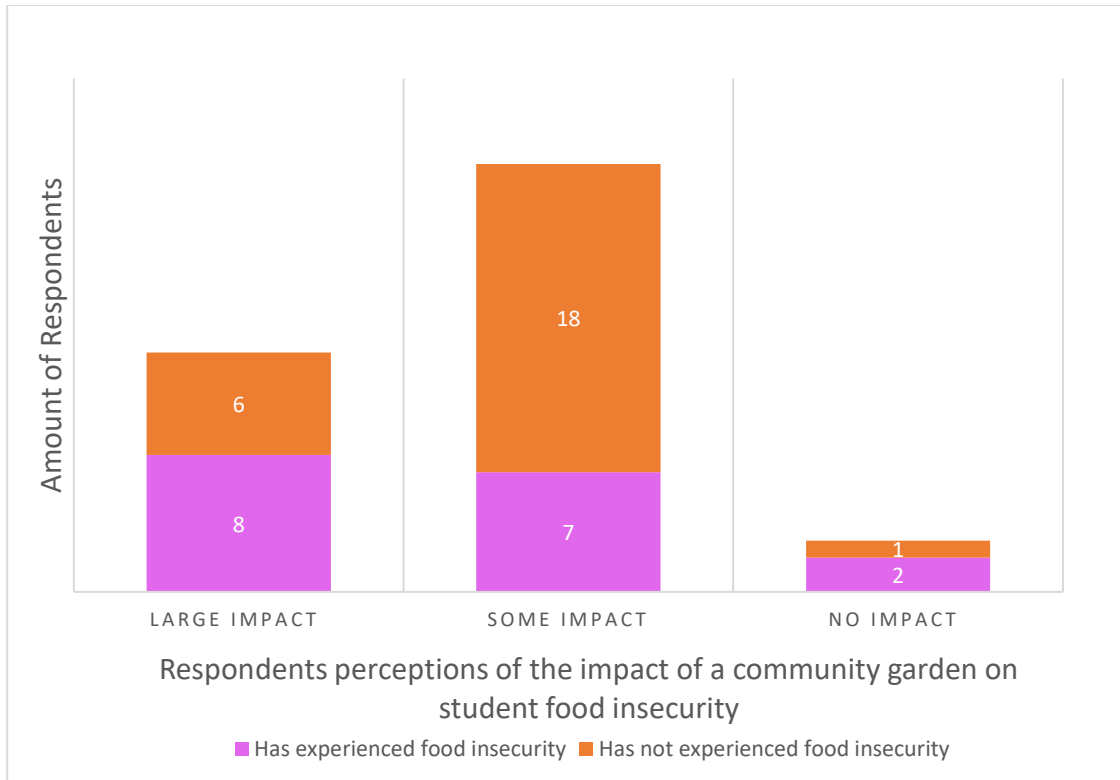


Figure 5. 42 Respondents experience of being food secure or insecure, contrasted to their perceptions of how a community garden would impact Sexton Campus students' levels of food insecurity.

Most respondents believed that a community garden on Sexton campus would have 'some impact' or a 'large impact' on student food security. Figure 5 conveys that both 'food insecure' and 'food secure' students believed that that the implementation of a community garden on Sexton would have an impact on campus food security.

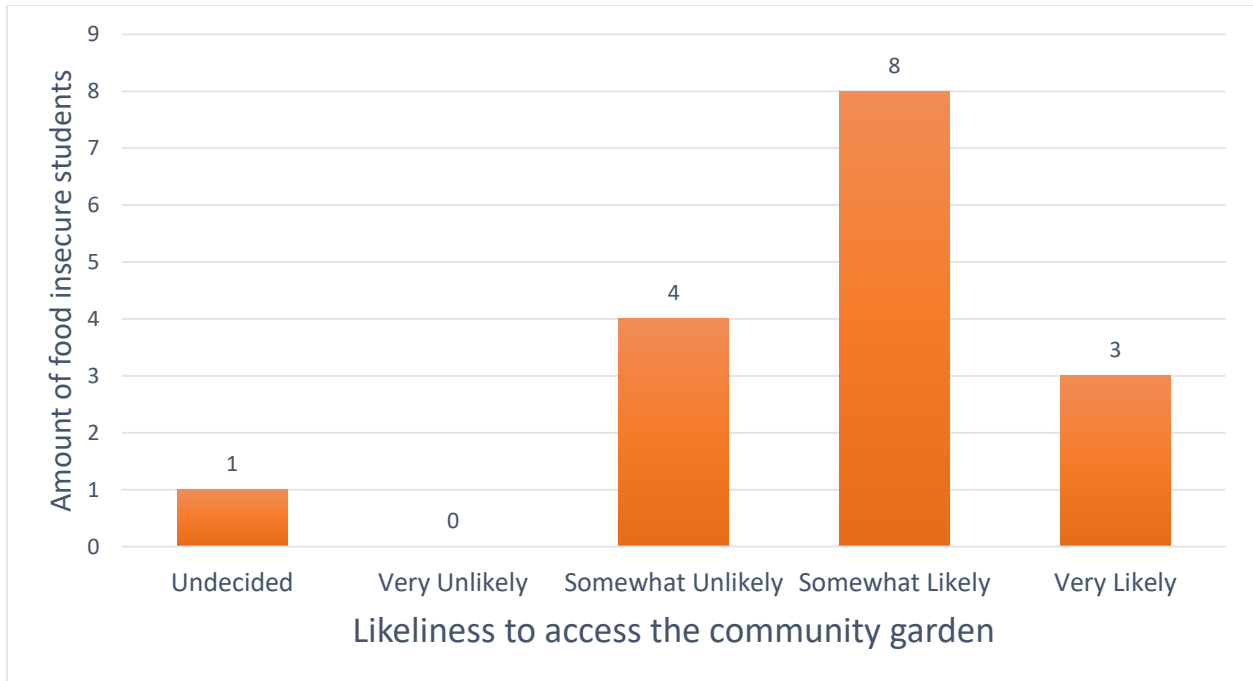


Figure 6. Anonymous respondents identifying as ‘food insecure’ students and their likeliness to access a community garden on Sexton campus. Responses were categorized into: Very unlikely, somewhat unlikely, undecided, somewhat likely, and very likely.

Figure 6 shows ‘food insecure’ respondents, who make up 36% of the total sample results, and their likeliness to access a community garden on Sexton campus for fresh produce. We found that 68% of ‘food insecure’ students, would access the community garden for fresh produce.

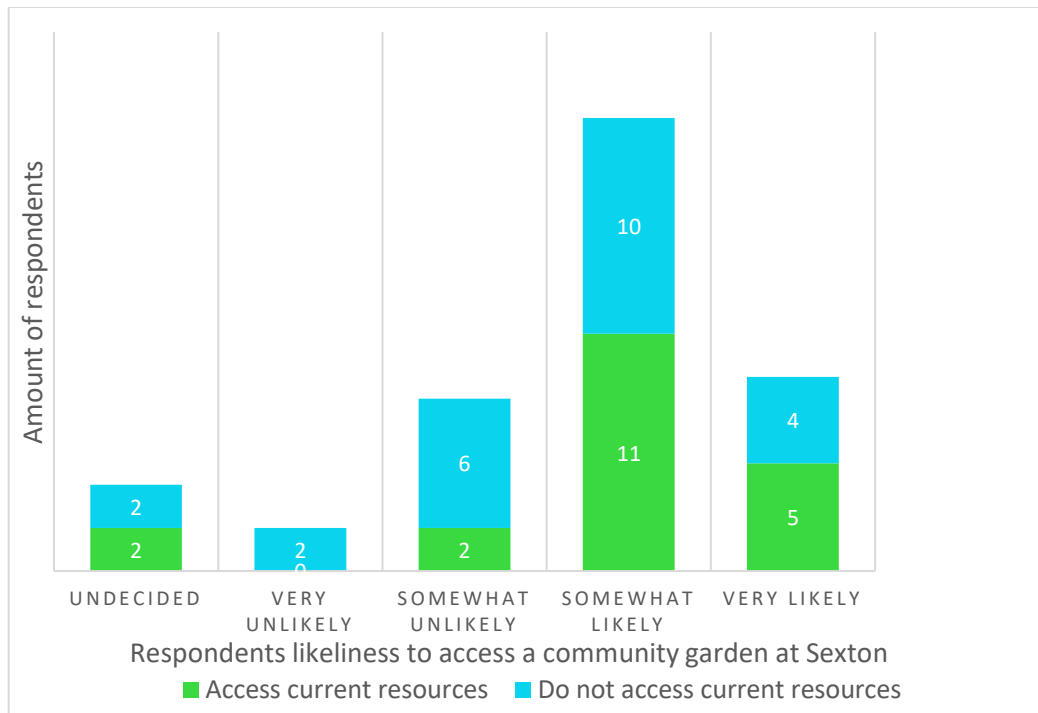


Figure 7. Likelihood of respondents to access a community garden on Sexton campus based on if they do or do not currently access food security resources at Dalhousie University on Sexton or Studley campus. Options of 44 responses are: undecided, very unlikely, somewhat unlikely, very likely.

Figure 7 compares respondents experience with accessing food security resources on Dalhousie campuses with their likelihood to access a community garden on Sexton campus. Fourteen respondents would access the community garden on Sexton campus for fresh produce even if they were not currently utilizing the food security resources. Most students who currently access campus food security resources would also access the community garden on Sexton campus.

From our qualitative analysis using thematic coding, five main themes appeared from the responses to question seven of the survey, the question being: are you aware of other benefits of community gardens excluding contributing to food security? The five themes being: community building, environmental impacts, wellbeing, sustainable food source, and environmental education. Table 1 below shows the frequency of each thematic code appeared in the survey responses. From these main themes, a wide range of subthemes appeared under each main theme, which can be observed in Figure 8 displaying the coding tree. Some responses to the question were straightforward yes or no and therefore did not include any codable phrases.

Table 1. The number of responses to survey question “Are you aware of other benefits of community gardens excluding contributing to food security?” that contained a thematic code.

Code	Number of times that code appeared in responses
Community building	17
Environmental impacts	12
Wellbeing	14
Sustainable food source	7
Environmental education	6

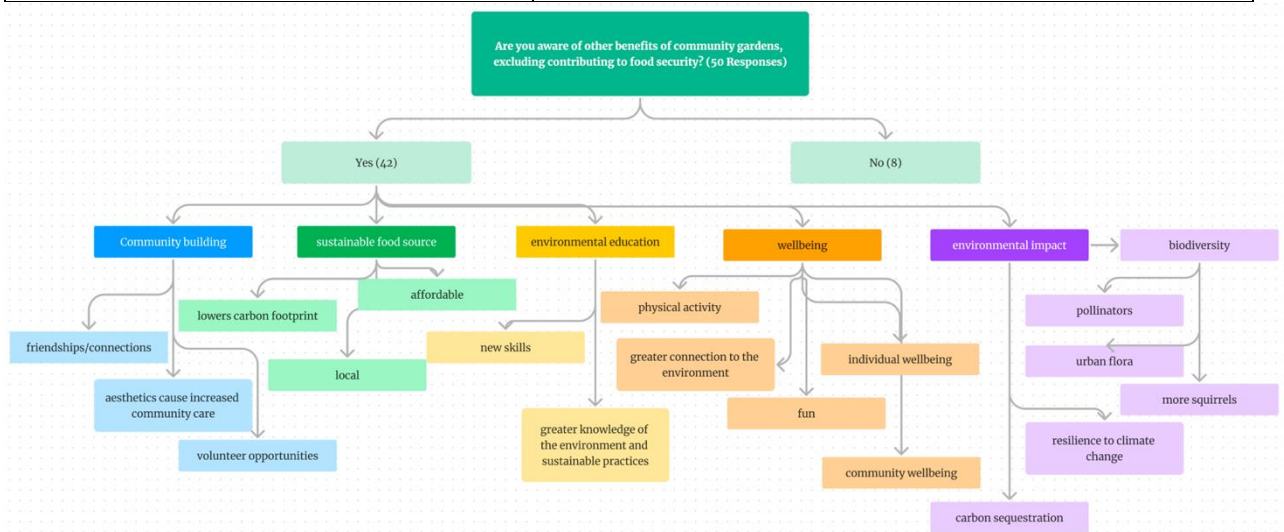


Figure 8. Thematic coding tree of question 13 from survey, “Are you aware of other benefits of community gardens excluding contributing to food security?” 8 responded ‘no,’ 42 responded ‘yes.’ The main apparent themes are in darker coloured boxes: community building, environmental impacts, wellbeing, sustainable food source, and environmental education. Subthemes of each category are in lighter coloured boxes correlating to each main theme.

Discussion

The purpose of our research was to gain an understanding of food insecurity on Dalhousie University campuses and to learn if a community garden would benefit those who live near the Sexton campus. There are currently multiple food security resources located on the Studley campus, however the only food security resource available on the Sexton campus is the breakfast club, which runs once a week. Through our research we gained an understanding of how food insecurity affects undergraduate students at Dalhousie. These results could be applied

more generally to other Canadian university campuses and help gain an understanding of the ways in which university students could be supported in a system which is actively disregarding the need for affordable food in Canada.

While there were many significant findings to our study, the ones deemed most important were: over 1/3 of Dalhousie students surveyed had experienced food insecurity in their time as an undergraduate student and that there is an interest from students in implementing a community garden on the Sexton campus. This garden would provide access to nearby students and allow for the easy access and consumption of nutritious food, at no cost to the students accessing the garden. 50% of students indicated they would volunteer on a proposed community garden for at least a couple of hours a week. Through this community engagement we determined that if there were to be a community garden built, it would be a sustainable food security option as there would be adequate volunteers to run the garden. Interestingly, there is no indication that those who suggested that they were food insecure are more likely to volunteer on a community garden (Figure 3). We hypothesize this is because those who are food insecure have prior commitments such as one or more jobs, children, or otherwise time-consuming responsibilities which may be tied in with their presumed food insecurity.

We found that experiences with food insecurity did not greatly affect respondents their willingness to participate in a community garden. Both 'food secure' and 'food insecure' are likely to volunteer or use the garden for food security purposes.

Most respondents believed that a community garden would have a 'large' or 'some' impact on student food security. Experiences with food insecurity did not greatly affect their perceptions of whether they thought a community garden could impact student food security. The majority of 'food secure' and 'food insecure' students think that a community garden would impact food security, as seen in Figure 5.

Our literature review suggested that recruiting volunteers was one of the biggest barriers to the creation of a community garden (Minnick Hanson, 2012), however we found that most surveyed students would dedicate time to volunteering at a community garden on Sexton campus. Furthermore, as discussed below in analysis of thematic coding tree, students seem eager for opportunities to get involved in their community in sustainable ways.

The thematic coding tree (Figure 8) helped us identify students' perceptions of community gardens. Respondents showed knowledge of a wide range of benefits of community

gardens including social, psychological, economic, and environmental impacts. Respondents overwhelmingly believed that community gardens are a place for fostering new connections, creating new opportunities, and educational spaces. These results support the findings in our literature review from Garside et al., 2014. They also believe that community gardens have positive effects on the environment and personal as well as community wellbeing.

The most frequent response was about community building/engagement which suggests that students are eager for more opportunities to get involved in their community. Respondents believed that increased opportunities to volunteer lead to a stronger sense of community. A community garden on campus would increase the number of opportunities for students to engage with.

We found that some respondents thought that if the aesthetics of campus was improved that students would care more about the space. An anonymous survey respondent stated:

“The garden would also give students an opportunity to volunteer and be engaged in their community. Finally, community gardens help transform or "beautify" a space on campus, encouraging students to care about and care for this new and improved space.” ~

Anonymous survey respondent

In the coding tree (Figure 8), the sub theme “aesthetics” can be found under the main code “community engagement”. Improved aesthetics encourage students to care about and for a campus space. A community garden on campus would help improve aesthetics and help achieve “curb appeal” said one survey respondent. We found a community garden would increase community involvement overall.

Respondents had detailed knowledge of ways in which community gardens can positively impact environmental factors such as increasing urban biodiversity, carbon sequestration, and climate change resiliency. Most respondents had some prior knowledge of the benefits of community gardens. Responses who related the benefit to an issue at Dalhousie University, university campuses or Sexton campus were useful for further identifying if students believed a community garden would be impactful on Sexton campus. This can be observed in the respondent quotation “this specific case, a garden would likely increase the traction in Sexton, which may help integrate it with the rest of Dalhousie-- particularly students based out of Studley” (Anonymous survey respondent, personal communication, March 18, 2023). One respondent related community engagement as a method of climate change resilience. Saying,

“community interconnectedness builds resilience to the impacts of climate change” (Anonymous survey respondent, personal communication, March 18, 2023). Further, respondents believed that a community garden would have mental health benefits for both visitors and volunteers of the garden. Saying that green spaces and the creation of your own sustainable food source positively contribute to mental and physical health (Anonymous survey respondent, personal communication, March 20, 2023).

Overall, participants were well acquainted with the reasoning and benefits of community gardens. Furthermore, they are interested in sustainable food sources, increasing campus engagement, improving community and environmental health, and learning new skills. Meaning that it would be justifiable to create a campus community garden, receive funding, and to recruit volunteers and visitors.

Limitations

We had three main limitations in our study. The first limitation was the time period for which to complete our study, because this is a school project, we as a group were not able to properly process the data collected. The second limitation that we had was the small sample size, especially when compared to the target which we aimed for. We gained 50 responses to our survey, while we were hoping to gain 100+. The final limitation we faced is that there were little to no examples of local research done on a similar topic and this made our literature dependent on studies done in other countries. There was a lack of existing literature on campus community gardens in Canada, with no studies having previously taken place in Nova Scotia.

Suggestions for Future Research

We believe one avenue for future research that could be investigated further is centered around student knowledge and accessibility of food security resources on the Dalhousie campus. We were able to notice this area for potential research in our data, by observing fourteen respondents who said they would access the proposed community garden for fresh produce but are not currently utilizing any food security resources on campus. It would be worthwhile to discover why these students aren't accessing the currently available food security resources, which could be a result of a lack of knowledge or a preference towards a community garden.

Conclusion

In conclusion we found that many of the participants/respondents would like to have a community garden created on the Dalhousie Sexton Campus, as it helps to foster community engagement and build relationships in the surrounding community. Namely, there is a good knowledge of the benefits of a community garden and positive views on the implementation of a community garden on sexton campus. There is also good knowledge among the participants/respondents about the food security resources that are available on campus. Lastly, most participants/respondents would be likely to participate/volunteer at the community garden.

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Appendices

Appendix A: Survey Questions

1. Are you an undergraduate student at Dalhousie University?
 - a. Options: Yes, No.
2. What campus do you live in closest proximity too?
 - a. Options: Studley/Kings, Carleton, Sexton, None of the above.
3. Where do you live?
 - a. Options: Dalhousie/King's student residence (on campus), Off-campus with no other people, Off-campus with family or partner(s), Off-campus with housemates, prefer not to answer.
4. How many classes do you currently take on the Sexton Campus?
 - a. Options: none, 1-3 classes, 4-5 classes.
5. What is your current year of study?
 - a. Options: First year, second year, third year, fourth year, fifth year +.
6. Have you experienced food insecurity as an undergraduate student at Dalhousie? *Food insecurity is defined as not having consistent access to food that supports a healthy lifestyle.*
 - a. Options: Yes, no, Unsure, Prefer not to answer.
7. Have you accessed on campus food security resources on campus this semester? Please indicate whichever are applicable.
 - a. Options: Dal Urban Garden, DSU Foodbank, DSU Farmer's Market, Sexton Breakfast Club, The Loaded Ladle, None of the above.
8. Based on your knowledge of community gardens, do you think that student food security would be impacted by the implementation of a student run community garden that grows fresh produce? Please pick an impact level.
 - a. Options: no impact, some impact, large impact.
9. Do you currently volunteer at a community garden?

- i. Options: Yes, no
10. How likely are you to volunteer if there was a community garden on Sexton Campus? How often?
- a. Options: Very likely, Somewhat likely, Undecided, Somewhat unlikely, Very unlikely.
11. How many hours per term would you volunteer at a community garden on Sexton Campus?
- a. Options: 0 hours, 1-3 hours, 4-6 hours, 7-9 hours
12. If there was a community garden on Sexton campus, how likely are you to access it to get fresh produce?
- a. Options: Very likely, Somewhat likely, Undecided, Somewhat unlikely, Very unlikely.
13. Are you aware of other benefits of community gardens, excluding contributing to food security? Please describe below.
- a. This is a short answer open-ended question.
14. If you were to volunteer in a community garden, what would be your greatest incentive?
- a. Options: promoting campus food security, volunteer experience, community building/friendships/networking, personal interest in gardening.

Appendix B: Survey Responses

Question	Options	Number of Responses
1. Are you an undergraduate student at Dalhousie University	Yes	53
	No	0
2. What campus do you live in closest proximity to?	Studley/Kings	26
	Carleton	3
	Sexton	19
	None of the above	5
3. Where do you live?	Dalhousie/King's student residence (on campus)	2
	Off-campus with no other people	4
	Off-campus with family or partner(s)	10
	Off-campus with housemates	37
	Prefer not to answer	0
	None	17

4. How many classes do you currently take on the Sexton campus?	1-3 Classes	11
	4-5 Classes	25
5. What is your current year of study?	First Year	3
	Second year	9
	Third year	15
	Fourth year	19
	Fifth year +	7
6. Have you experienced food insecurity as an undergraduate student at Dalhousie? <i>Food insecurity is defined as not having consistent access to food that supports a healthy lifestyle.</i>	Yes	19
	No	32
	Unsure	4
	Prefer not to answer	1
7. Have you accessed on campus food security resources on campus this semester? Please indicate whichever are applicable.	Dal Urban Garden	0
	DSU Foodbank	7
	DSU Farmer's Market	12
	Sexton Breakfast Club	6
	The Loaded Ladle	19
	None of the above	25
8. How much do you think that student food security would be impacted by the implementation of a student run community garden that grows fresh produce on the Sexton campus? Please pick an impact level below:	No impact	3
	Some impact	25
	Large impact	14
9. Do you currently volunteer at a community garden?	Yes	3
	No	50
10. How likely are you to volunteer if there was a community garden on Sexton Campus?	Very likely	0
	Somewhat likely	24
	Undecided	13
	Somewhat unlikely	12
	Very unlikely	7
11. How many hours per term would you volunteer at a community garden on Sexton Campus?	0 hours	16
	1-3 hours	18
	4-6 hours	17
	7-9 hours	3

12. If there was a community garden on Sexton campus, how likely are you to access it to get fresh produce?	Very likely	9
	Somewhat likely	21
	Undecided	4
	Somewhat unlikely	8
	Very unlikely	2

<p>13. Are you aware of other benefits of community gardens, excluding contributing to food security? Please describe below.</p>	<p>No (8 responses) Allows people so get active in the community I only know of the Dal Studley garden! Sense of community, access to healthy food, connection to environment, physical activity Community building, education, harm reduction, mental health benefits More sustainable access to food and a great way to connect with community! building a sense of community! fostering a sense of community, promotes sustainable agriculture, teaches valuable skills Increasing appreciation for wider university community Community gardens cultivate community well being. Community interconnectedness builds resilience to the impacts of climate change. Community building, improving mental health general wellbeing being outdoors yes. Local access permits better sustainability and pricing! reduce food carbon footprint Engaging a sense of community and support. Learning new things and how to grow your own food. Environmental benefits, student involvement, mental wellness from gardening, community building through student collaboration "Increased bee populations, sequestration, curb appeal, there's also increased chance of bee stings but I think the benefits outweigh that. As someone who is not deathly allergic. Mental health benefits as well when spending time in green space. " Better for the environment, saving money on groceries, etc. I'm not too sure but it would be nice to know more! Offering a place for community connections They reduce carbon emissions because you avoid having to ship food over long distances Building community, mental health benefits of gardening and general education surrounding sustainability and agricultural practices. A means of getting the community together Mental health benefits! The one that comes to mind is one with the city</p>	
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called the community fridge, i walk by it almost every day, if you are able to bring food to the fridge and when and if people need it they can go and access the free food.

Environmental impacts, communal impacts
I believe that it would result in a nicer community.

promoting sustainable sourcing of fresh food
Could act as pollinator gardens for pollinators
bringing community together

yep

I am aware, as i learned through classes

In this specific case, a garden would likely increase the traction in Sexton, which may help integrate it with the rest of Dalhousie-- particularly students based out of Studley. The garden would also give students with an opportunity to volunteer and be engaged in their community. Finally, community gardens help transform or "beautify" a space on campus, encouraging students to care about and care for this new and improved space.

Community engagement

yes

Positive effects to the environment

Community, education

Community gardens are important for fostering a sense of community (third places), and as an educational resource.

Economics and a happy outlet

Community growth, diversifying and urban setting with greenery

community building/ cooperation

Gardening, creating connections, creating urban flora in halifax, it aids pollinators

Yes, I recognize that growing and cultivating your own food or plants positively contribute to mental health and community wellbeing

Idk growing things is fun. Good for the brain.

Brings those beautiful bees

Developing friendships and skills such as gardening

14. If you were to volunteer in a community garden, what would be your greatest incentive?	Promoting campus food security	17
	Volunteering experience	18
	Community building/ friendships/networking	35
	Personal interest in gardening	26

Appendix C: Survey Promotion Poster



DO YOU TAKE CLASSES AT SEXTON CAMPUS?

Take part in our short survey on student perceptions of campus food security and community gardens!



Fill out this survey if you...

- Take any number of undergraduate classes at Sexton campus
- and/or have an interest in Dal food security resources!

SCAN ME

This research project is being conducted for ENVS 3502 in the Department of Earth and Environmental Sciences at Dalhousie University. Contact mr466681@dal.ca for more information on our project



Appendix D: Survey Confidentiality Agreement



RESEARCH CONSENT FORM

We invite you to take part in an assignment for the course ENVS 3502/SUST 3502.

This study is being done by Kiera Thompson, Mary Legorburu, Tara Everding and Joel Kabiito in the department of Environmental and Earth Sciences at Dalhousie University in Halifax, Nova Scotia. The project is supervised/instructed by Caroline Franklin. The information below tells you about our research and what your responses will inform. This form outlines the benefits, risks, inconveniences, or discomforts you might experience during participation. You can take part in this study if you are interested in sharing your perceptions of community gardens and experiences with food insecurity on Dalhousie campuses. Approximately 100 people will be taking part in this research.

This survey will be used to aid in understanding the perceptions of community gardens and food security on the Sexton campus to learn if a community garden on the campus would help to benefit students in the area. Other studies have shown that a community garden on campus has been seen to improve instances of food insecurity, instigate a community mentality, and help with mental health. The findings of study will compile qualitative data to analyze and indicate whether there is a desire or need to implement a community garden. Finally, we'd like to hear from you about how you think we could become a more food secure university overall. Questions in this survey have the potential to present only minimal discomfort for participants. You are free to decide if you would like to participate in this study. Even if you do take part, you can leave the study at any time for any reason. There will be no negative consequences to yourself. You may choose not to answer any of the questions.

When we share our project findings, we will only talk about your results anonymously. This means that you will not be identified. Any identifying information will be removed from the file.

If you agree to participate in this research project, please electronically fill out this consent form. We are happy to share our results with you after the semester is over in April 2023, if you would like to receive the results of this research project please supply your email address in the box indicated at the end of the survey. Please note that we are not collecting email addresses as data for the research project.

I have read the explanation about this study. I understand what I am being asked to do and my questions about the study have been answered. I agree to take part in this study. I know that participating is my choice and that I can leave the study at any time.

Participant Signature: _____ Date: _____

If you have any questions, comments, or worries about your participation in this research project, please contact Kiera Thompson, or my instructor Caroline Franklin, Department on Earth and Environmental Sciences.