

UBC Social Ecological Economic Development Studies (SEEDS) Sustainability Program

Student Research Report

**Nutrition Education for University of British Columbia Students: Opportunities,**

**Facilitators & Barriers**

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## **Executive Summary**

Currently, the University of British Columbia (UBC) Wellness Centre's nutrition resources are not being used by UBC students as much as desired (Stevens, H., Personal Communication, January 21, 2019). Our community partner, the UBC Wellness Centre, would like to find new ways to offer nutrition resources that will fit the needs and wants of students, with the hope of encouraging more students to use these resources. The main goal of this project is to provide the UBC Wellness Centre with information about how nutrition-related resources can capture the interest of UBC students.

In collaboration with the UBC Wellness Centre and SEEDS Sustainability Program, our team developed a survey using the Qualtrics Survey software and distributed it through our individual social media accounts, posters, class announcements, and in-person with an iPad. The results of our study showed that most students prefer to learn about practical cooking skills and also prefer their resources to be easily accessible and readily available. Among other formats, websites and workshops were mentioned as the preferred style of learning. Although this sample size was not representative of the whole UBC student population, the information from these responses can provide the UBC Wellness Centre with an idea of what some students are interested in.

Our team was successful in meeting most of our short-term objectives, which included completing a Qualtrics survey by mid-February and providing a summary of our relevant data to the UBC Wellness Centre. The one short-term objective that we did not meet was to collect 200 survey responses, since we were only able to collect a total of 160 responses within our time limit. The success of this project will continue to be evaluated by measuring changes in attendance at nutrition workshops and the utilization rate of nutritional resources in the future.

## **Introduction**

University students are at risk for poor dietary behaviours (Matthews, Zok, Quenneville, Dworatzek, 2014) which can lead to negative future health outcomes (Shahril, Dali, Lua, 2013). Unhealthy dietary behaviours maintained throughout university can result in the continuation of poor diet-related behaviours in the later years of life (Plotkinoff et al., 2015). Therefore, action must be taken to help students increase their nutrition knowledge and skills (Matvienko, Lewis, Schafer, 2001), through the utilization of nutrition-related resources (Brace, De Andrade, Finkelstein 2018).

Even though UBC offers nutrition-related resources, it cannot be effective in changing student's diet-related behaviours if students do not use them. On average, only 10 students attend the nutrition workshops offered by the UBC Wellness Centre (Stevens, H., Personal Communication, March 15, 2019). Therefore, we hope to increase student's usage of nutritional resources by finding out what prevents and encourages students from utilizing these resources. We decided to find this out by asking the students themselves via a survey.

Our team developed, distributed and analyzed a survey in collaboration with the UBC Wellness Centre and SEEDS Sustainability Program in order UBC Wellness Centre to make informed changes to existing resources and the development of new nutritional resources. Our target population, therefore, includes all 56,788 UBC students who are enrolled at the Point Grey campus in 2018 Winter Session (UBC, 2019). The majority of these students are undergraduates (80%), domestic students (74%), and under the age of 26 (87%)(Szeri, Mathieson, 2018).

By providing nutrition-related resources that reflect the preferences and interests of UBC students, we believe that the number of students utilizing nutrition resources will improve which may consequently lead to the improvement of their diet-related behaviours.

## **Situational Assessment & Planning Framework**

### ***Existing Problems***

A common issue among university students is their poor nutrition habits (Shahril et al., 2013). For example, many university students do not meet their nutrition recommendations for fruit and vegetable intake or the recommended consumption of dairy and whole grain products (Shahril et al., 2013). Many university students also exceed their energy requirement (Munt, Partridge, Allman-Farinelli, 2017) and consume high amounts of fast foods, snacks, soft drinks (Shahril et al. 2013), and ready-made convenience foods (Bertrand, Crerar, Randall, 2018). They also tend to skip meals during the day, which leads to excess calorie consumption at night (Spalsbury, 2013).

The poor diets of university students can lead to negative health outcomes later in life including chronic diseases such as osteoporosis, diabetes, obesity, and hyperlipidemia (Shahril et al., 2013), which subsequently contributes to higher health care costs (Deliens et al., 2016). Unhealthy diets can also lead to unintentional weight gain (Deliens et al., 2016), an increased risk of coronary heart disease (Arts, 2014) and decreased psychosocial health which may be detrimental to their academic performance (Raskind, Haardorfer, Berg, 2019).

Factors that affect the nutrition habits of university students range from individual, social and environmental, as explained below. On the individual level, one cause of student's poor dietary habits may be their lack of knowledge about healthy eating and nutrition requirements (Matvienko et al. 2001). A lack of knowledge and skill in food planning, preparation and cooking may also contribute to poor dietary behaviours (Munt et al., 2017). Other individual factors that contribute to their unhealthy dietary habits may be their lack of parental oversight (Bertrand et al., 2018), budget constraints (Bertrand et al., 2018), taste preferences (Munt et al., 2017), time management

(Spalsbury, 2013), stress levels (Spalsbury, 2013), self-discipline (Deliens et al., 2016), and their interest, confidence and motivation in diet and health (Munt et al, 2017).

On the social level, university students' dietary habits are influenced by the diet of their friends and family, as well as the level of social support they receive on healthy eating (Spalsbury, 2013). Pressure to fit in and the perceived expectation to consume unhealthy foods in certain social situations also affect the eating behaviour of students (Munt et al., 2017). Family members often send “care packages” that tend to be calorie-dense with high fat and sugar content, which can lead to negative dietary behaviours (Spalsbury, 2013).

On the environmental level, factors that can lead to unhealthy diets in university students include the accessibility and availability of unhealthy foods (Munt et al., 2017), the location of the eateries, as well as the cost of healthy versus unhealthy food (Spalsbury, 2013). It can also include the lack of adequate facilities to prepare, cook and store healthy foods on university campuses (Munt et al., 2017), as well as nutrition-related messages in the media (Valente & Myers, 2010).

UBC and the BC government currently have policies and programs that address the issue of poor diet. For example, different committees at UBC have different action frameworks that comply with the policies and practices under the UBC Food and Nutrition Action Framework in order to ensure that the food on campus is nutritious, and supports health and well-being (Food and Nutrition Working Group 2017). The UBC Food Services provides nutrition resources and support, as well as healthy food options throughout campus (UBC Food Services, 2019). Our key stakeholder, the UBC Wellness Centre, also has nutrition-related resources including workshops, handouts, and recipes to take home (Geng, 2019). In terms of government action, the current BC government has the policy to restrict trans fats in all food service establishments (Health Link BC 2019). They also run a voluntary Informed Dining program and enforce Nutritional Guidelines for Vending Machines in Public Buildings (Health Link BC, 2019).

Other universities have addressed the issue of poor diets among students through the use of interventional studies; the results of which can be used to determine which strategies were effective. For example, one study tested an intervention in eight universities in the US and showed that a 10-week online nutrition and physical activity curriculum focusing on healthful eating and physical activity was effective at increasing student's consumption of fruits and vegetables (Greene et al., 2012). A peer nutrition education program that was implemented at Brescia University College in Ontario, Canada, has been successful in reaching students through interactive displays, education sessions, cooking demonstrations, websites and social media, as well as fruit and dairy incentive cards (Matthews et al., 2014).

### ***Behaviours***

The UBC Wellness Centre has reported low attendance at their nutrition-related events (Geng, 2019), which could lead to the assumption that most students prefer not to utilize the nutrition resources available on campus. It is important to change this behaviour since nutrition interventions can help students increase their knowledge of healthy eating and improve self-efficacy in this area, which helps improve their eating behaviours (Brace et al., 2018).

### ***Mediating factors***

#### ***Individual***

It can be argued that the individual factors that influence diet could also act as mediating factors in the student's behaviour of utilizing nutritional resources. For example, since taste preferences, time management and level of stress are individual factors that influence the diet of a university student (Munt et al, 2017) they may also influence their use of nutrition resources. Students may feel more inclined to attend a nutrition workshop that incorporates the foods that they have a taste preference for. If students are managing their time well and/or do not feel too stressed,

they may feel as though they have enough time to learn more about food and nutrition through using a nutritional resource. Furthermore, if a student is already interested and motivated in improving their diet and health, they may also be more inclined to access a nutrition resource.

### Interpersonal

Talking to friends, family, or peers about nutrition may increase an individual's interest in learning more about nutrition and could, therefore, increase the individual's interest in utilizing nutrition resources (Murt et al., 2017). Additionally, hearing positive reviews from friends about nutritional resources available on campus could also increase student interest (Jensen et.al., 2014). Individuals may also be encouraged to attend nutrition workshops if their peers are also attending the workshop since this provides a level of comfort and an opportunity to socialize (Brown, Bray, Beatty & Kwan, 2014).

### Environmental

The environmental mediating factors that may improve university students' use of nutrition resources are advertisements and the accessibility of nutritional resources (Kelly, Mazzeo & Bean, 2013). Having various online and physical advertisements can improve awareness about nutrition resources on campus (Kelly, et al., 2013). Also, improving the convenience of using these resources, such as by fitting them into the student's university schedules, can also increase utilization (Kelly et al., 2013).

### ***Health Behaviour Theory***

We chose the health behaviour model called the "Precaution Adoption Process Model" (PAPM) to develop our project. This model describes the stages that an individual goes through before and after they decide to act on an issue. In our case, the issue is the lack of utilizing nutrition resources. According to the PAPM, there are seven different stages in this decision making process,



which flow from 1) being unaware of the issue, 2) being unengaged by the issue, 3) deciding to act, 4) deciding not to act, 5) decided to act, 6) acting, and 7) maintenance (Rimer, Glanz, Harris, 2005).

We chose this model because it aligns with the purpose of our project, which is to try to better understand the intrapersonal factors that cause students to either utilize nutrition resources or not use them. We used this model to formulate questions for our survey as it helped us recognize the importance of inquiring about factors influencing behaviour at different stages, and in turn, what the students believe would help them move into the ‘deciding to act’ and ‘acting’ stages.

To determine how many of the student respondents were in the unaware stage (stage 1), we created a survey question to ask whether they knew about the UBC Wellness Centre. To determine what was influencing them to be at the ‘deciding not to act’ stage (stage 4), we created a survey question asking what prevented them from accessing a nutrition resource in the past. We designed survey questions to determine what students believe would make them more engaged by nutrition resources, by asking what nutrition topics they are interested in and in what format they would prefer to receive nutrition-related information. We also asked the students what would encourage them to access nutrition resources so that we could determine what would move them into the ‘deciding to act’ and ‘decided to act’ stages (stages 3 and 5).

The UBC Wellness Centre can utilize the information from this survey to make positive changes to current resources in order to address the factors that are keeping students from acting (stage 6), and further promote movement into the maintenance stage (stage 7).

### ***Discussions of the Situational Assessment***

We have analyzed literature research by evaluating the strength of evidence and its applicability to UBC students. We also collected primary information regarding nutrition resources on the UBC campus through personal observations and an interview with our community partner,

Hillary Stevens (Geng, 2019). Stevens is considered a reliable source because of her role as a registered dietitian with first-hand experience at the UBC Wellness Centre.

A limitation of our situational assessment is that we collected most of our information from secondary sources, which were based on studies from other universities, predominantly in the US, and therefore is not specific to our target population and may not represent the specific situation at UBC. The reason we collected most of our data from secondary sources was that we had a time-constraint limiting us to conducting our situational assessment in only three weeks. Furthermore, some of the papers that evaluated the effectiveness of interventions had weaknesses in their methodology and may not reflect long-term changes or may be an inaccurate representation of the university student population.

## **Project Goals & Objectives**

### ***Goals***

To enrich UBC Wellness Centre's understanding of what UBC students want with respect to food and nutrition education such as topics of interests and resource formatting.

### ***Project Objectives***

#### **Short term**

- To formulate one Qualtrics survey designed for UBC students by mid-February.
- To reach a minimum of 200 UBC student survey participants by reaching them online and/or in person by the first week of March.
- To provide a summary of relevant data to the UBC Wellness Centre by the end of March.

### Medium term

- To develop at least three nutrition resources and have them posted at the UBC Wellness Centre by the end of April 2020.
- To increase by 50% the number of participants at nutrition workshops offered by UBC Wellness Centre.
- To pilot one nutrition workshop that has been tailored to the interests of the UBC students by the end of December 2019 (based on data from this survey).

### Long term

- To further increase by 60% the number of UBC students that access the nutrition-related resources available at the UBC Wellness Centre by December 2025.

### **Project Outputs**

The main output of our project was the Qualtrics survey and the results generated from it. We will discuss these results in this section, and provide a summary of the results to the UBC Wellness Centre via e-mail. In this section, we separate the key findings into five components; the general demographic of participants, the format of nutritional resources previously accessed, the nutrition topics of most interest, the preferred format for learning this information, and lastly, the methods and incentives that the students believe will encourage them to participate and become engaged in nutrition-related resources. The intended audience for this report will be anyone who is interested in the development of new nutritional resources for the UBC student population. This could be professional staff in the Wellness Centre, as well as members of the Food and Nutrition Working Group including, but not limited to, UBC Food Services, UBC Botanical Garden, and the AMS Food Bank. Additionally, our summary of recommendations that will be provided to the UBC

Wellness Centre is separated into two distinct categories; the recommended topics for nutrition resources and the recommended delivery format for these resources.

Overall, we collected survey responses from 160 students. There was a relatively equal representation of students from each academic year (Figure 1) with a greater emphasis on first-year students (26.42%). Furthermore, we were able to collect survey responses from students in various faculties, where the majority, 27.67% and 22.64%, were from the Land and Food Systems (LFS) and Arts faculties, respectively (Figure 2). Additionally, 66.04% of those who took the survey were domestic students (Figure 3). The majority of respondents being domestic students or from the faculty of LFS may be due to the fact that the majority of our peers on social media fall into these categories.

The majority (around 61%) of participants reported having heard of the UBC Wellness Centre before. Out of the student respondents who had previously accessed nutrition-related resources, the most common format used was in the form of workshops, handouts and pamphlets, blog posts and websites (Figure 4). The least utilized formats include cooking classes, community kitchens, grocery store tours, and meeting with a dietitian (Figure 5). Based on the feedback from the respondents, who had used nutrition resources in the past, the resources provided by the UBC Wellness Centre were helpful and relevant to student life but were also found to be general and time-consuming (Figure 6). When asked to elaborate on the factors that hindered them from using nutrition resources in the past, out of the 141 responses to this question, the most common student answers were “disinterest” (15.6 %), “money” (8.5 %), “too far” (7.8%), “unaware” (12%), and “too busy” (29.8%). It is important to note that some students think there is a fee associated with attending nutrition workshops, when in fact, the UBC Wellness Centres services are free, indicating a lack of awareness. Knowing this, the UBC Wellness Centre can enhance their presence on campus

by providing more detailed advertisements that emphasize their free nutrition workshops and resources.

One of our survey questions asked the students to rank their preferences of three categories of nutrition topics, which included practical strategies for students, general healthy eating information, and nutrition for specific populations such as vegans or vegetarians. The most popular topic was practical strategies (at 50%), while general healthy eating information and nutrition for specific populations were both ranked equally as the least popular topics (25% each) (Figure 7). Another survey question gave the students the option to express their interest in more detail, and most students commented on how they want to learn more about meal-prepping (Figure 8).

The results of our survey showed that the format of nutrition resources that most respondents prefer was website materials and that the least preferred format was handouts. However, the differences in preference were minor, as shown in Figure 8, with the calculated means for each format option being relatively similar. Therefore, even though website materials were ranked as the most preferred format option, it is not ranked much higher than that of other format options such as social media and workshops. When given the opportunity to elaborate, some students emphasized the importance of workshops, which they believed would provide opportunities to practice their cooking skills. Other students commented on their preference for websites due to the convenience of being able to access this type of format at anytime or place. Based on the results of this survey question, we recognized that it is important to accommodate for various student preferences by providing various learning formats.

Lastly, for the survey question asking students what would encourage them to use nutrition-related resources, the majority of the student respondents answered “take home items” and “free food”. In regards to the preferred time of day for participation in workshops, the greatest interest was for sessions during the weekend or in the evenings (Figure 10). Knowing when and where the

workshops are available was another factor that 37% of the student respondents indicated would increase their attendance at nutrition workshops.

In summary, the data showed that the majority of students who responded to our survey prefer web-based formats for nutrition-related resources and are most interested in learning more about practical skills and strategies for everyday life. By providing resources that cover these topics in a web-based format, UBC students will hopefully be more engaged by the resources and move from being unengaged by the issue (stage 2) to deciding about acting, (stage 3). Students will be encouraged to move further along the stages of the PAMP to stages 5 and 6 (the decided to act and acting stages), if incentives such as free food and takeaway items are offered.

Despite the positive findings, there are limitations that are associated with our project. Due to our small sample size of only 160 students, our findings may not be generalizable to the UBC student population. Building on this, a limitation of our study is that our participants represent few, specific groups on campus, including subpopulations such as the faculty of LFS. This bias means that our data may not be representative or generalizable to the entire UBC student population. Another limitation includes us not being able to gather data that was of interest to our community partner, Hillary Stevens. During initial consultation, she showed interest in knowing more about the opinions of first-year students, international students, and students from different faculties. For this survey, we were lacking in responses from international students, therefore, the results cannot be generalized to international students.

### **Evaluation Plan**

Our project will be evaluated based on the degree of completion of each objective stated previously. Our short-term objectives have been completed, but due to the longevity of the project,

the medium- and long- term objectives will need to be addressed later in the future in order to assess the success of the project.

Our team was successful in meeting the first and third stated short term objectives by publishing a Qualtrics survey and completing a data synopsis prior to each defined deadline; however, the project group did not meet the second short term objective of reaching 200 survey participants. Due to the time constraints of the project, a total of 160 survey responses was acquired by the first week of March. Despite this, the project group and community partners collectively agreed that this was a sufficient number of responses and that it was appropriate to move on to the data analysis stage.

In order to evaluate the extent to which this project achieves its medium-term objectives, it is recommended that future project members first develop a minimum of 3 nutrition resources, including a workshop, that apply our data-based recommendations. In order to determine the level of effectiveness and student's interest level, the future group members are suggested to pilot one workshop prior to launching the new resources in December 2019. In order to rate the success of this project, future project members should document the number of participants that attend the newly created workshops and compare those numbers to the previous attendance rate of nutrition workshops at the Wellness Centre. In order to meet the third medium-term objective, which aims to increase workshop participation rates by 50%, an average of 3 more students (from the baseline of 6 participants) should be present at each workshop.

In order to evaluate the extent to which our project meets the long-term objectives, the future project members must first collect baseline data on how many students are currently using all types of nutrition resources, including handouts. The future project members can then track the changes in nutrition resource utilization, and these levels can be compared with baseline data to determine the effectiveness of implementing our recommendations for all types of nutrition

resources. The successful completion of the long-term objective would manifest as a 60% increase (from the current baseline in 2019) in the number of UBC students accessing the nutrition-related resources available at the UBC Wellness Centre by December 2025.

Relating back to the “Precaution Adoption Process Model,” this CBEL project primarily targets UBC students that are either unaware, unengaged or have decided not to act. The accomplishment of both the third medium-term and long-term objectives would then be interpreted as the project’s success in guiding students’ towards the “Decided to Act” and “Acting” categories.

## **Conclusion**

Overall, the project provided information that the UBC Wellness Centre was looking for. This information will help the Wellness Centre adapt their nutrition-related resources to the wants and needs of UBC students. For our survey, our team identified that students are more interested in learning about practical skills and strategies than general healthy eating advice. We also identified the fact that the majority of the students prefer web-based resources over handouts.

Through this project, our team learned about the difficulty of analyzing survey questions. We found that since we made survey questions that asked students multiple questions at once (such as question 5 and 10), it was difficult to determine what the general consensus was. Therefore, it is important to only ask one question at a time when developing survey questions, so that the analysis of the survey is more straightforward. In addition, we learned that the logic model was a great tool in helping us frame our project and helped us form indicators to assess the progression of our project.

The next steps that are required in order complete our objectives is collecting baseline data on the student’s use of nutrition resources and attendance at nutrition workshops after implementation. This will be useful in determining if the implementation of our recommendation helped increase the student’s use of nutrition resources. The UBC Wellness Centre can then



implement our recommendations by creating or re-designing nutrition resources. After implementation, they can collect data on the attendance to nutrition workshops and the use of all types of nutrition resources to see if the the project was successful. The UBC Wellness Centre could also redistribute the survey to collect data from a wider audience so that the data is more representative of the UBC student population.

### **Authors' Contributions**

All authors brainstormed and edited the survey questions, created and edited our Logic Model, conducted in-person surveys with an iPad, analyzed the survey data in Qualtrics, and contacted multiple student clubs in Facebook to help advertise our survey. All authors also contributed to the production and delivery of our in-class presentation and to the writing and editing of the written report.

Individual contributions from Adrian Hardjojo included making the Qualtrics survey, buying a \$50 UBC Bookstore Gift card (used as an incentive for students to participate in the survey), going to the UBC Wellness Centre to analyze their nutritional resources, compiling the professor email list to contact them about the survey. For the presentation, he created and delivered the presentation slides on the recommendations regarding nutrition topics, the format of future nutritional resources, and how we evaluated our project. Adrian also wrote part of the Project Outputs and Author's Contribution section of the report.

Christine Janusz created our main poster and distributed them on poster boards all throughout campus, presented the Background, Main goals, and Project Objectives, and wrote the Evaluation Plan and Logic Model sections of the final report.

Jiajia (Alicia) Geng created more posters and handouts, she contacted various undergraduate societies to promote the survey, accompanied Adrian to the UBC Wellness Centre to interview

Hillary Stevens, accompanied Sarah to one of the class announcements, helped design the newsletter, presented our key findings from our analyzed data, and wrote the Situational Assessment section of the final report.

Emily Suk Nam Yuen further developed the goals and objectives of our project, went to one of the nutritional workshops for additional analysis, presented the lessons that we learned from completing our project, and wrote part of the Project Outputs section of the final report.

Sarah Walters found contact information for UBC professors and e-mailed 63 of them to ask them to distribute our survey. She also made 3 class announcements and made 2 Facebook posts about the survey. She presented about the Precaution Adoption Process Model and how it relates to our project, and wrote the Situational Assessment section of the report.

Lastly, Jacomie Strydom was our main liaison for communicating with our community partners (Hillary Stevens, Sally, and Kelly), made a classroom announcement about the survey, wrote the newsletter for our community stakeholders, presented our key findings from our analyzed data, and was the final editor of the report.

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## Appendices

### *A) Survey Questions*

Hi there! Thank you for your interest in participating in this survey!

#### What is the survey for?

As a group of UBC students in a class called Applied Public Health Nutrition (FNH 473), we have put together this survey to find out what UBC students, such as yourself, are interested in seeing on campus with respect to nutrition- and food- related resources. We have developed this project in collaboration with faculty, staff and the UBC Wellness Centre as part of the SEEDS Sustainability Program.

#### Who will use the information gathered from the survey?

There are various campus partners that currently offer nutrition and food skills workshops, such as the UBC Wellness Centre, Student Housing & Hospitality Services, student-led clubs, and more. The information from this survey will help these campus partners ensure their resources cover topics that UBC students are interested in, and are delivered in the most effective and appealing way. The UBC Wellness Centre, for example, is hoping to offer a wider selection of nutrition education resources, and the results from this survey will help them design these resources in a way that meet the needs and interests of UBC students.

#### How long will it take?

Your participation in this survey will only take approximately 5 to 10 minutes. We appreciate that you are taking the time to fill out this survey!

#### A benefit of taking the survey:

Once you have completed the survey, you will be given the opportunity to enter a raffle for a chance to win either: a \$50 UBC bookstore gift card, a \$15 UBC Food Service Gift Card or a UBC Wellness Centre goody bag. Your feedback is very valuable as it will help improve the selection of nutrition resources at UBC so that current and future UBC students can improve their food- and nutrition-related knowledge and skills.

All responses will remain anonymous.

#### **Q1 What is your current year standing in university?**

- 1st year
- 2nd year
- 3rd year
- 4th year
- 5th year
- Graduate Student

**Q2 What faculty are you in?**

- Applied Science
- Architecture and Landscape Architecture
- Arts
- Audiology and Speech Sciences
- Business
- Community and Regional Planning
- Dentistry
- Education
- Extended Learning
- Forestry
- Graduate and Postdoctoral Studies
- Journalism
- Kinesiology
- Land and Food Systems
- Law
- Library, Archival and Information Studies
- Medicine
- Music
- Nursing
- Pharmaceutical Sciences
- Population and Public Health
- Science
- Social Work
- Other \_\_\_\_\_

**Q3 Select one of the following options that apply to you:**

- Domestic BC student
- Domestic, out of province student
- International student

**Q4 Have you heard of the UBC Wellness Centre before? If yes, specify from where.**

- Yes \_\_\_\_\_
- No

**Q5 Which of the following nutrition education resources have you accessed in the past (select all that apply)? Please specify if the resources are from UBC or outside of UBC.**

	From UBC	Outside UBC	Never used
Workshops	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Handouts/pamphlets	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Blog posts	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Websites	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Community kitchen	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Cooking classes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Gardening classes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Met with a registered dietitian	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Grocery shopping tour	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Q6 The resources were... (select all that apply)**

- Helpful
- Relevant to student life
- Accessible on campus
- Hands-on learning
- Time commitment was too short
- Was a good amount of time
- Practical
- Too general



- Not helpful
- Irrelevant to student life
- Accessible at home
- Lecture style learning
- Time commitment was too long
- Impractical
- Other \_\_\_\_\_

Q6b Please elaborate on why you chose the above answers

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Q7 In the past, what has prevented you from accessing a nutrition resource? (eg, inconvenient time or location, uninterested in topic, too busy, etc)

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Q8 From the following nutrition topics below, rank them (drag and drop) based on what you would like to further your knowledge in. (1 = Highest interest, 3 = Lowest interest)

- \_\_\_\_\_ General healthy eating Information
  - Examples include: Understanding the Canadian Food Guide, Understanding nutrition labels & ingredient lists, and Fad diets (trending diets) & myth busting
- \_\_\_\_\_ Practical strategies for students
  - Examples include: Meal prep, Cooking in residence, Cooking on a budget, Eating during stress and Managing food cravings
- \_\_\_\_\_ Nutrition for specific populations
  - Examples include: Diets for active individuals, Eating disorders, Vegan and/or vegetarian diets and Cooking with food allergies/intolerances

Q9 What specific topic(s) would you like to learn more about? (Even if not listed above)

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Q10 What type of format would you like to learn more about healthy eating/receive the nutrition content above?

	Prefer a great deal	Prefer a lot	Prefer a moderate amount	Prefer slightly	Do not prefer
_____					

In-person event (workshops, events, cooking class, etc)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Print (handout, poster)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Website material (newsletter, blog post)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Social media (posts, videos, podcasts)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Apps on phone	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other, specify	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**Q11 Please elaborate on why you chose the above answers**

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**Q12 What would encourage you to attend a nutrition-related workshop?**

- Free food
- Group discussions
- Potluck
- Lecture-style workshops
- Item(s) you bring home with you
- Learning about practical skills
- Hands-on learning
- Evening sessions
- Noon sessions
- Early morning sessions
- Weekend sessions
- Specific theme
- Informal (able to socialize and mingle)

? Knowing about the workshops (more accessible advertisement)

? other, specify \_\_\_\_\_

### B) Survey Results

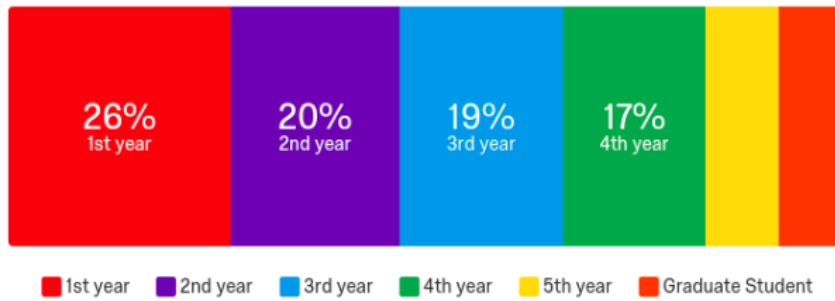


Figure 1. Year standings of participants

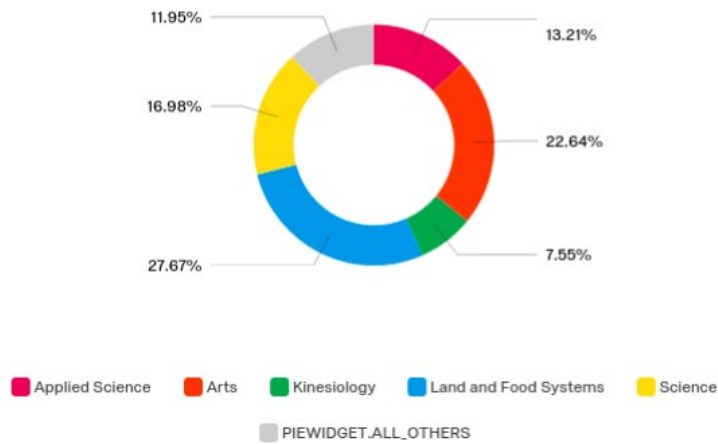


Figure 2. The faculty the participants are in

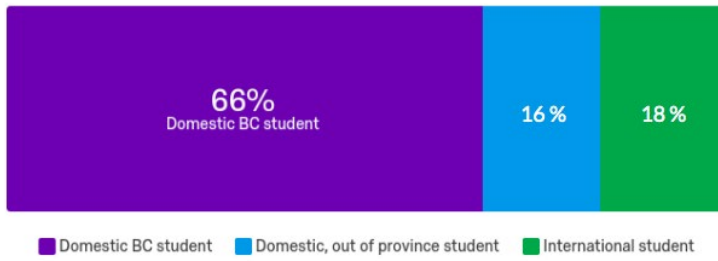


Figure 3. International vs Domestic students who participated in survey

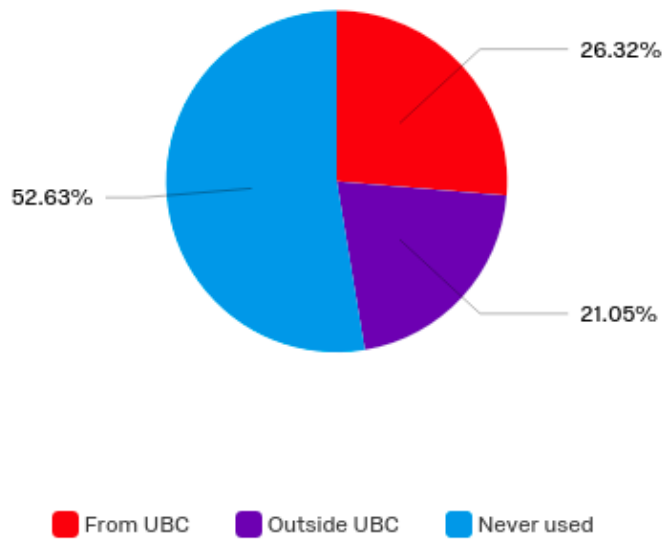
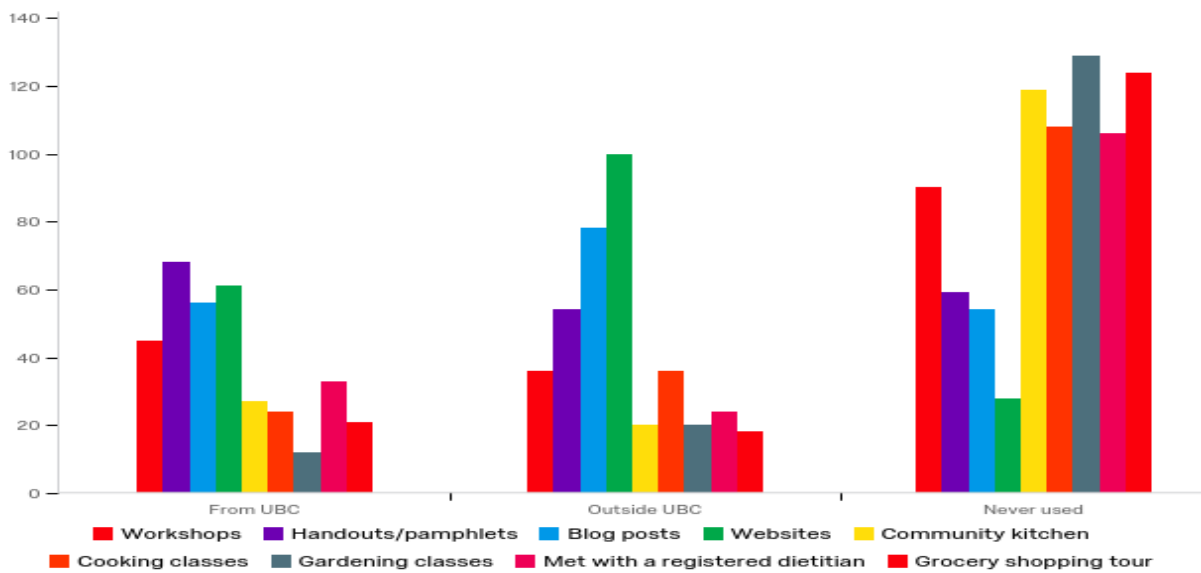


Figure 4. Ratios of resources accessed From UBC, Outside of UBC, or Never used



**Figure 5. Where and in what format did participants access nutritional resources**

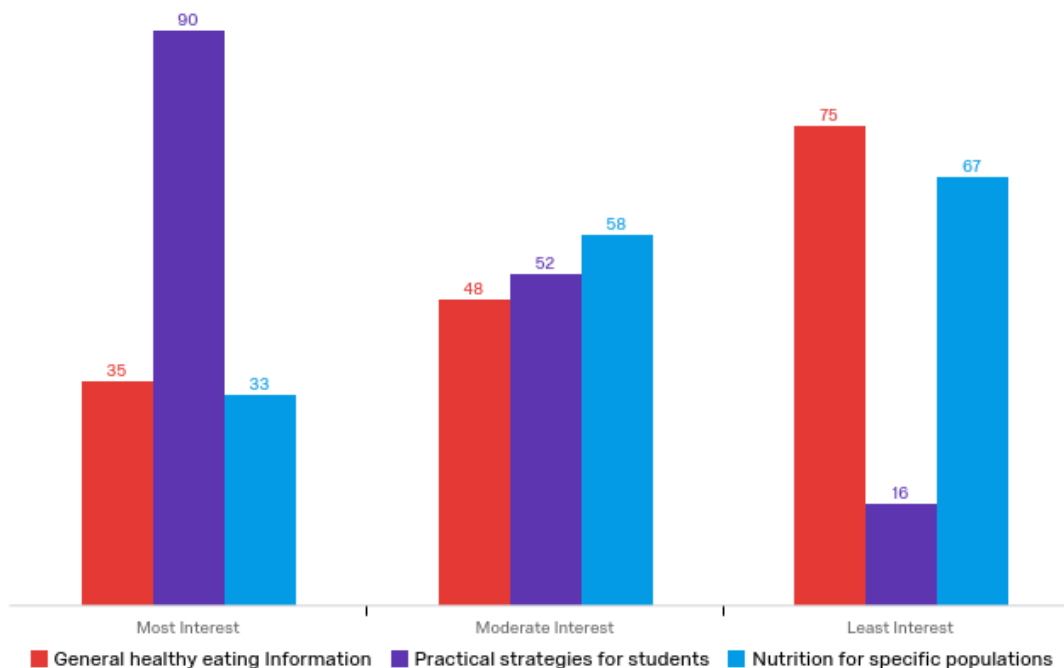
1	Helpful	65.41%	104
2	Relevant to student life	49.06%	78
3	Accessible on campus	30.19%	48
4	Hands-on learning	19.50%	31
5	Time commitment was too short	6.29%	10
6	Was a good amount of time	20.75%	33
7	Practical	30.19%	48
8	Too general	10.06%	16
9	Not helpful	5.03%	8
10	Irrelevant to student life	5.66%	9
11	Accessible at home	29.56%	47
12	Lecture style learning	10.06%	16
13	Time commitment was too long	6.29%	10
14	Impractical	2.52%	4
15	Other	9.43%	15
			159

**Figure 6. Student’s opinions on the resources that they have accessed in the past.**

Good	Bad	Suggestions	Reasons for not using resources
<p>On campus resources are accommodating to students- useful, inspiring</p> <p>Making healthy, easy good food and getting to keep the recipes</p> <p>Lecture style is enjoyable</p> <p>Online resources are easily accessible and</p>	<p>Too basic/general (pamphlets)</p> <p>Not engaging enough</p> <p>Time commitment too long and not drop-in (workshops), range of students too wide</p> <p>Targeted towards students with a meal plan</p>	<p>Websites/online resources/Blogs/CF G are most accessible and time-efficient-make a blog where students can interact/comment (eats around campus).</p> <p>Tips on cooking and storage (time and length).</p>	<p>Did not access nutrition resources because individual already has a “good grasp on healthy diet.”</p> <p>Did not access because it felt like common sense.</p> <p>Didn’t seek nutrition help, just ate healthy food!</p>

<p>affordable</p> <p>Varsity teams have private cooking lessons (with meal prep strategies)- possible suggestion for groups/clubs (obviously with a bit of a cost).</p> <p>UBC sports nutrition site is a good resource.</p> <p>Advertisements make resources more accessible</p>	<p>Dietician was hard to access</p> <p>Repetitive</p> <p>Not affordable (?)</p> <p>Condescending tone and not relevant to students</p> <p>Unaware/did not notice resources</p> <p>Too short (to have lasting impact) and not applicable</p> <p>Talking with dietician and attending a workshop is a huge time-commitment</p>	<p>Make workshops drop-in</p> <p>Provide classes with different experience levels</p> <p>Provide easy fixes for typical problems</p> <p>we want results with as little work as possible!</p> <p>Help students plan for a healthy diet</p> <p>Be concise, thorough and hands-on.</p>	
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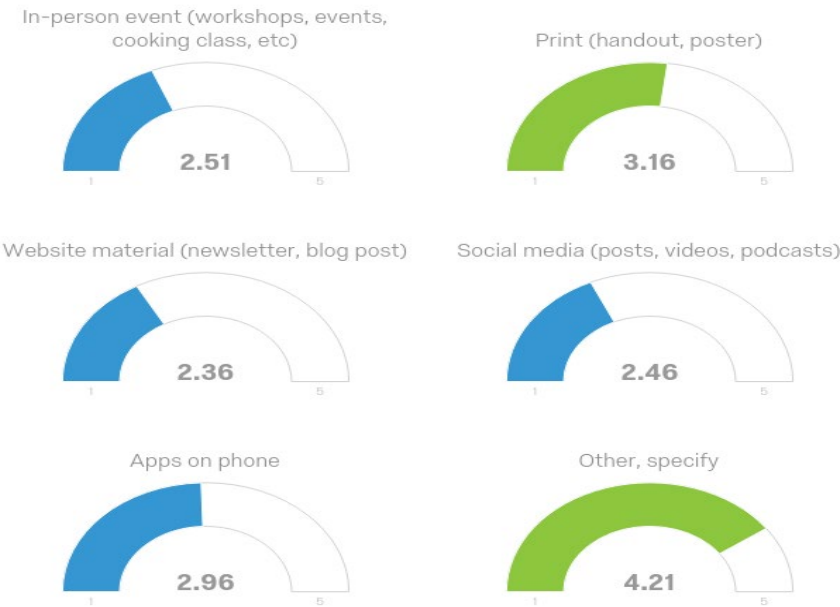
**Table 1. List of feedback given by the UBC students regarding general nutritional resources they have used**



**Figure 7. Preference in nutrition topics**

Type	Quantity	% of total responses
Meal Prep	21	22.6
Diets for active individuals	12	13.0
General healthy cooking & eating & meal planning	11	11.8
cooking w/ a budget	11	11.8
Preferred diets (e.g. vegan & vegetarian)	10	10.8
Stress eating & food cravings	9	9.7
Fad diets & myth busting	7	7.5
Healthy recipes	4	4.3
Drugs and supplements	4	4.3
Eating disorder	3	3.2
Food safe	1	1.1
<b>Total</b>	<b>93</b>	<b>1</b>

Figure 8. More details regarding their interest in nutritional topics



**Figure 9. Preference for the format of nutrition resources**

15	other, specify	2.52%	4
11	Weekend sessions	29.56%	47
12	Specific theme	41.51%	66
3	Potluck	32.70%	52
9	Noon sessions	18.87%	30
4	Lecture-style workshops	16.35%	26
6	Learning about practical skills	58.49%	93
14	Knowing about the workshops (more accessible advertisement)	37.74%	60
5	Item(s) you bring home with you	57.86%	92
13	Informal (able to socialize and mingle)	40.88%	65
7	Hands-on learning	59.12%	94
2	Group discussions	18.24%	29
1	Free food	82.39%	131
8	Evening sessions	48.43%	77
10	Early morning sessions	8.81%	14
			159

**Figure 10. Factors that encourage workshop attendance**



## C) Newsletter Style Report



2019 JANUARY - APRIL



# UBC WELLNESS NUTRITION RESOURCE SURVEY

A CBEL PROJECT CONDUCTED BY JIAJIA GENG, ADRIAN HARDJOJO, CHRISTINE JANUSZ, JACOMIE STRYDOM, SARAH WALTERS, EMILY SUK NAM YUEN

The UBC Wellness Centre provides a multitude of resources to assist students in living their best life. It was an honour to be part of a project that involved in helping UBC Wellness Centre find ways to change their resources that could help increase student's participation. Our community partners, Hillary Stevens (UBC Wellness) and Sally Lin (SEEDS projects), were essential to the success of our project since they informed us on the successes and shortcomings of past resources, which helped provide us with a good starting point for our project. Not to mention, their quick and insightful feedback throughout the process allowed us to stay on track and move forward smoothly.



Using the UBC Survey Tool, we developed a survey to determine what types of nutrition resources UBC students are most interested in. Collecting this information allowed us to provide recommendations to the UBC Wellness Centre on how to create nutrition-related resources that are appealing to UBC students and that encourage them to utilize the resources.

When analysing the survey, we realized that asking multiple questions within a single survey question made it difficult to extrapolate the results. This taught us the importance of creating survey questions that ask only one question at a time in order to ensure the analysis is more straightforward

We utilized public health concepts and frameworks such as the Public Health Ontario's Six-Step Planning Model to implement and evaluate our project. Our project brought to light just how much time and effort goes into planning community programs, and that tools such as the logic model can help keep us organized throughout the process and help us improve our communication and program planning skills along the way.



D) Logic Model

<b>S I T U A T I O N</b>	<b>INPUTS</b>	<b>OUTPUTS</b>	<b>OUTCOMES</b>		
	<p><u>What we INVESTED</u></p> <ul style="list-style-type: none"> <li>❖ FNH 473 Group #6 students – time, knowledge and skills</li> <li>❖ FNH 473 Professor and TA – advice, support and guidance</li> <li>❖ UBC Wellness Centre</li> <li>❖ UBC SEEDS Program</li> <li>❖ Survey Prizes:               <ul style="list-style-type: none"> <li>❖ \$50 and \$15 gift-cards and a goodie bag</li> </ul> </li> <li>❖ iPads for in-person survey questionnaires</li> <li>❖ Qualtrics program for the creation of the survey</li> <li>❖ LFS Learning Centre for meetings and discussions</li> <li>❖ FNH 473 Lecture Material</li> </ul>	<p><u>What we DID</u></p> <ul style="list-style-type: none"> <li>❖ Final Presentation</li> <li>❖ Final Report</li> <li>❖ Promotional Poster</li> <li>❖ Qualtrics survey data summary</li> <li>❖ 1-page summary of recommendations for future workshops</li> <li>❖ Field day: Distributed 30+ posters around the UBC campus</li> </ul> <p><u>Who we REACHED</u></p> <ul style="list-style-type: none"> <li>❖ All UBC students               <ul style="list-style-type: none"> <li>❖ Special focus on first year and international students</li> </ul> </li> </ul>	<b>Short-</b>	<b>Medium-</b>	<b>Long-</b>
			<p><u>Change In:</u></p> <ul style="list-style-type: none"> <li>❖ Awareness–UBC Wellness Centre acquires insight into what UBC students want with respect to nutrition education</li> <li>❖ Knowledge–UBC wellness centre gains knowledge into how to create resources that peak the interests of students and have minimal barriers for use</li> <li>❖ Skills– Future creation of resources will impact skill development of student population</li> <li>❖ Attitude– Students develop greater interest in accessing nutritional resources</li> </ul>	<p><u>Change In:</u></p> <p>Behaviours:</p> <ul style="list-style-type: none"> <li>❖ Greater participation in future workshops</li> <li>❖ Greater use of nutrition resources</li> </ul>	<p><u>Change In:</u></p> <p>Social:</p> <ul style="list-style-type: none"> <li>❖ Students develop greater awareness of the importance of healthy eating</li> <li>❖ Students develop health eating habits</li> </ul> <p>Economic:</p> <ul style="list-style-type: none"> <li>❖ Students develop skills necessary to purchase healthy foods that are inexpensive</li> </ul>