

University of British Columbia

Social Ecological Economic Development Studies (SEEDS) Sustainability Program

Student Research Report

Nutrition and Wellbeing of Students Attending the Allard School of Law

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FNH 473 | Group 9

SEEDS & Nutrition and Wellbeing of Students Attending the Allard School of Law

*Gillian Hayes, Lilia Laihem, Alyssa Chai, Faiza Ahmed,
Michelle Marin, Sharon Sun*

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Executive Summary

The Wellbeing Team at the Peter A. Allard School of Law (Allard Law) at the University of British Columbia (UBC) provides law students with resources addressing their physical, emotional, and behavioural needs. A situational assessment revealed relevant problems in the target population relating to poor mental health and limited food literacy. Behaviours that contributed to these issues included students' dietary patterns and social behaviours, further influenced by mediating factors at the individual, interpersonal, and environmental levels. Initial interview results suggested that Allard Law's academic workload and time-consuming nature causes students to prioritize academic and career-driven goals over their health and wellbeing.

Using the Social Cognitive Theory (SCT), we analyzed the interactions between personal, behavioural, and environmental factors (reciprocal determinism). Five other SCT constructs (self-efficacy, behavioural capability, relevant expectations, reinforcement, and observational learning) were also considered. With this in consideration, and together with the Allard Student Wellbeing Counsellor, Anna Kline, and the UBC Social Ecological Economic Development Studies (SEEDS) Sustainability Program, our project aims to improve Allard Law students' wellbeing by addressing food literacy through nutritional resources that improve diet quality and brain health.

Program outputs included (1) initial interviews and follow-up surveys of multi-year law students, (2) nutritional resources in the form of videos and infographics to support brain health and cognitive performance, and (3) a summary and recommendations document to guide future wellness programming.

Our short-term evaluation plan consisted of process and outcome indicators measured through follow-up surveys to indicate effectiveness in increasing food literacy levels. Our medium- and long-term evaluation plan would assess the level of engagement of students in support networks, annual survey reports of wellbeing, and evaluate improvements in available nutrition resources and healthy food options on campus.

Introduction

The Peter A. Allard School of Law is one of Canada's leading law schools with innovative researchers, supportive faculty, and outstanding graduates. The professional program maintains high academic expectations; however, these expectations and the structure of Allard Law leave students with limited time to engage in wellbeing awareness and health-promoting initiatives. The Allard Wellbeing Team is committed to providing resources and mentally supporting students to perform better academically, increase cognitive functioning, improve study habits, and achieve long-term academic success (Peter A. Allard School of Law, n.d.). Wellbeing is the ability to lead a healthy balanced life despite existing barriers and the profession's demanding nature (Canadian Bar Association, 2012). However, for Allard Law students, there is a gap in the availability and utilization of nutritional programming and resources to maintain healthier lifestyles that contribute to wellbeing, since 46.7% of Allard Law students interviewed have never accessed any wellbeing services at UBC.

Additionally, the transition to online learning has reduced student participation in Allard Wellbeing activities like workshops, presentations, and virtual events, indicating a need for a new approach to engaging students in an online setting. Areas of educational awareness and providing flexible programs around students' schedules will encourage them to take an active approach to utilize wellbeing strategies and initiatives.

This project's target population includes graduate and undergraduate students of Allard Law School, including the Juris Doctor (JD) and Master of Law (LLM) program. Other stakeholders include the SEEDS program, Allard Wellbeing Team, which consists of JD and Graduate Law Student Society Director of Wellness leaders, and the Allard Student Wellbeing Counsellor and community partner, Anna Kline.

The impetus for this project is to support law students by providing resources and tools to improve diet quality to enhance brain health, mood, and cognitive development. We believe that this aligns with the desires of Allard Law students, as 90% of interview participants expressed the desire to learn about the impacts of nutrition on mental health and academic performance.

Situational Assessment

We conducted a situational assessment based on our key stakeholders' expectations, including Anna Kline, Wellbeing Team leaders, SEEDS coordinator, and the Allard law students. The assessment required literature searches and primary data from conducting initial interviews with Allard Law students, which provided information on our target population. The literature search yielded evidence-based resources from peer-reviewed journals to support these claims. Sources of information were assessed for relevance to the project by objectively considering factors that may strengthen or weaken the program's potential. Our collection of resources influences program planning decisions and affects how program outcomes relate to our target population.

Key Problems Relevant to Allard Law Students

Poor mental health: In the initial interviews with the students, 31% expressed that the nature and structure negatively impacted their health and wellbeing. A literature search revealed that law students experience higher rates of burnout, depression, and anxiety than other university students (Temple, 2012). The Canadian Bar Association (2012) also published a report stating that 58% of lawyers, judges, and law students experience significant stress or burnout, 48% experience anxiety, and 25% experience depression. Skead and Rogers (2015) indicate that law students' poor mental health can be attributed to the program's high demands and stressful nature.

Limited food literacy: Food literacy is "having the knowledge, skills, and attitudes necessary to choose, grow, prepare and enjoy healthy food to support one's health, community and the environment" (Fraser Health Authority, n.d, para. 1). Many students have the skills to prepare their meals, as 81.2% of students said that most of the meals they consume are prepared by themselves. However, 40.6% did not confidently agree with the statement that they were knowledgeable on nutrition and how it affects overall health and wellbeing. Several students also expressed that they were confused because of contradicting nutrition information to which they are exposed. Overall, limited food literacy can make it hard for students to make healthy food choices.

Behaviours

Our initial interviews revealed that students' poor eating and dietary patterns and social behaviours contributed to the problems identified above.

Eating and dietary patterns: Having regular meals and nutrient-rich foods can influence students' mental and physical health. A significant workload can be a barrier to this when students have less time to cook and are more likely to skip meals (Celnik et al., 2012). Forty-seven percent of students in the initial interview said they were likely to miss or delay meals when they felt pressed for time. Students also expressed inconsistent meal times due to the structure of their course timetable. Many complete their workload in the mornings while attending three-hour lectures in the evenings around dinner time, making it challenging to prepare and consume scheduled meals. Irregular eating patterns have been associated with an increased risk of mood disorders and, therefore, negatively impact mental health (Wilson et al., 2019).

Furthermore, many students' dietary patterns are not consistent with Canada Food Guide (CFG) recommendations. For example, the CFG recommends consuming a variety of fruits and vegetables every day (Health Canada, 2019); however, 40.6% of students reported eating fruits and vegetables less than once per day. Consuming an adequate amount of fruits and vegetables has been shown to have a protective effect against depressive symptoms (Głąbska, Guzek, Groele, & Gutkowska, 2020). Thus, students' dietary patterns directly reflect the lack of knowledge which consequently affect their overall health and mental wellbeing.

Social behaviours: Social norms and pressures easily influence the behaviours of law students. In the initial interviews, students reported that the industry encourages alcohol consumption, especially during networking events. Chronic alcohol intake can influence cognitive processing pathways and worsen mental health conditions (Mosel, 2021). Law students also reported the social normalization of excessive caffeine consumption, particularly during exam periods, which is a concern because high caffeine intake (>400mg per day) leads to increased feelings of stress and anxiety (Ferré, 2008). Additionally, students expressed that comparing their performance to their peers is commonplace and influenced by the profession's over-achieving nature. The pre-survey results showed that 18.8% of students felt more pressure to engage in negative behaviours or experienced increased stress due to interactions with other law students/peers. This embedded social behaviour increases students' feelings of anxiety and negatively affects their mental health.

Conversely, engaging in social networks increases exposure to nutrition knowledge and contributes to positive nutrition decisions (Jane, Hagger, Foster, Ho & Pal, 2018). However, the initial interviews suggested that only 15.6% of students engaged in social groups that actively advocate for health and nutrition. Social support through school clubs, social media groups, and community wellness programs may improve students' willingness to seek any needed support (Jane et al., 2018).

Mediating Factors

Individual: An individual mediating factor that influences behaviour includes students' busy schedules and the ability to prioritize healthy eating. In the initial interview, 34.3% of students said they did not find it easy to set aside time each week to prepare meals, highlighting how limited time affects their eating and dietary patterns. Busy schedules also promote eating on the go or eating meals alone (Celnik et al., 2012). Overall, 44% of students consume their meals alone, with one student expressing that "everyone [they] know feels the need to do things while eating instead of just focusing on eating." This results in less time to enjoy social aspects of food and hinders the building of a positive relationship with eating and nutrition.

Students' personal values may also affect the priority of healthy eating. A majority of students (87.5%) said that it is important for them to prioritize health and wellbeing, but many feel the need to compromise it by forgoing planning, shopping, and preparing meals to maximize academic performance. Low levels of self-efficacy in students were shown in 32% of respondents who indicated a lack of control over their health. As a result, law students' priority to performing well may have compensatory effects on their dietary habits and perceived control over their health.

Interpersonal: Interpersonal relationships with peers and family members can positively influence eating and dietary behaviours through encouragement and support. A significant majority (82%) felt supported by their peers, friends, and family members when making healthy food choices. Many students also rely on these relationships, especially during busy periods, for food preparation, with 78% of students saying that they primarily consume foods prepared by family members, friends, roommates, or peers. This suggests that dietary intake and patterns are influenced by those within their inner circle who influence what and when to eat.

Environmental: The UBC environment can significantly influence students and their behaviour. There are many resources available at UBC to support students, such as counselling through Allard Wellbeing or UBC Student Health, virtual support networks, and extracurricular clubs and societies. These resources can guide students on how to improve mental health and reduce overall stress. However, despite the wide range of resources available, 46.7% of students have never accessed wellbeing services provided by UBC or Allard Wellbeing.

The food system at UBC also plays a significant role in law students' dietary and eating patterns. From our initial interviews, 56.3% believed that there were a variety of food choices on campus, and 32.3% of students were satisfied with the food choices available on campus. The lack of varied food choices on campus makes it difficult for law students, especially those with restricted diets (e.g., plant-based diets, halal, kosher, etc.), to consume healthy foods on campus.

Furthermore, 26.7% of students considered food choices on campus to be affordable, while 27.6% believed nearby grocery stores, such as Save-on-Foods, the University Village, and the Alma Mater Society (AMS) Nest, offer enough affordable ingredients to prepare healthy meals. The lack of access to affordable food options may influence dietary patterns as students opt for cheaper but nutritionally deficient meals (Celnik et al., 2012). This suggests a higher intake of processed sugar, sodium, and saturated fats, contributing to poor dietary quality (Poti et al., 2015).

Environmental factors have also shifted recently due to the COVID-19 pandemic. The pandemic has increased social isolation, which is known to cause augmented feelings of loneliness, impacting levels of anxiety, depression, and addiction disorder (Kato, 2019). The transition to online learning increases screen time and has implications on student engagement and behaviour. For example, previous Allard Wellbeing research showed low interest in virtual extracurricular activities and wellbeing programming such as virtual yoga (Kline, Stewart, & Yan, 2020). Less participation in workshops, presentations, and online events due to "Zoom fatigue" reduces the Allard Wellbeing Team's ability to connect with students and create a remote supportive environment. However, many students also stated that they have been able to cook at home more and prioritize sleeping due to the transition to online learning, suggesting

that there are both positive and negative effects on behaviour caused by the response to the COVID-19 pandemic.

Health Behaviour Theory

We chose the Social Cognitive Theory (SCT) because we believe that the interactions between person, behaviour, and environment work together to affect Allard law students' health behaviors (see appendix C). This theory is practical in demonstrating behavior and dietary change (National Cancer Institute et al., 2005). The SCT is a framework for modeling health behaviour through the six primary constructs of reciprocal determinism, behavioural capability, expectations, self-efficacy, observational learning, and reinforcements (National Cancer Institute et al., 2005).

The individual, interpersonal, and environmental factors that mediate behaviour, discussed previously, influence one another through reciprocal determinism and are foundational to law students' learning environments. First, our project aims to influence the law students' perceived value of nutrition through resources relating to increasing cognitive function and supporting brain health. By relating nutrition to their academic and career performance, law students may feel more inclined to engage with and apply the content and recommendations provided. Secondly, law students' behaviours directly reflect their personal values while influencing their environment (National Cancer Institute et al., 2005). By increasing food literacy levels, students can incorporate different choices of positive and realistic activities, such as incorporating example foods and nutrients into their meal plans. Finally, the environment creates a space for students to exchange support, reinforce behaviours, and promote observational learning. Individuals learn from observing the actions of others and the benefits of those actions (National Cancer Institute et al., 2005). A nutrition program can provide the learning space for students to share and observe healthy dietary habits such as integrating healthy food and nutrients while reinforcing their behaviours by improved mood and cognitive performance in themselves and others.

The self-efficacy construct in the SCT refers to the students' self-confidence in making changes and overcoming any barriers (National Cancer Institute et al., 2005). Our project aimed to provide background knowledge on nutrients of interest and provide easy-to-incorporate strategies where students can identify and set healthy goals for

themselves while addressing self-efficacy. With behavioural capability, which is the ability to perform a behaviour based on the skills and knowledge needed for the specific task, we aim to provide quick and simple recipe ideas and provide students with an idea of the common skills and tools required to make these changes. Further, highlighting relevant expectations from engaging in positive health behaviours in our program will foster a sense of achievement and act as reinforcements to increase the likelihood that students will continue these behaviours and healthy habits. Our program aims to develop a supportive environment to enhance observational learning that will normalize prioritizing nutrition and wellbeing, encourage healthy behaviours, and influence other students in the process. Specific examples of how these constructs will be addressed in the "Program Outputs" section.

Limitations of Situational Assessment

limitation of our peer-reviewed journal articles is that they were not specific to UBC's Allard Law students. Many of these sources focus on more general populations, and therefore extrapolating information from these sources could fail to describe challenges and behaviours unique to Allard Law students accurately. Nevertheless, our use of previous Allard Law research and our primary research can be supported by secondary literature, implying that the situation's general aspects are similar.

Some aspects of the previous research on Allard Law students may not be applicable due to the change of geographical environment mediated by the COVID-19 pandemic. Research on the effects of the pandemic on university students relating to socio-economic factors and dietary behaviours is limited.

There were also limitations to the primary research we conducted via our sample population. Our initial surveys included 32 students out of 600 law students, which only represents 5.3% of the student population. Additionally, the sample was not randomly selected since students volunteered to participate. Volunteers may not have the same values as non-volunteers when considering their possible motivations for signing up. They may be more interested in nutrition and are therefore more inclined to engage in the program that provides recommendations. Therefore, there is the possibility of sampling error that could influence our situational assessment conclusions.

Project Goals and Objectives

This project will work towards achieving short term objectives that prioritize the needs of the students by addressing personal, behavioural, and environmental factors as described in the SCT. Our program plan and recommendations for future nutrition and wellbeing programming will be passed on to Anna Kline and the Allard Wellbeing Team who will implement the program to meet the medium and long term objectives of the project (See Evaluation Plan).

Project Goal:

Improve the health and wellbeing of students attending the Allard School of Law at the University of British Columbia. We aim to do this by addressing food literacy and providing resources to improve diet quality to support brain health, mood, and cognitive performance.

Short Term Objectives (1-12 months)

- By March 7th, 2021, we will develop and distribute to Allard law students nutrition-related infographics containing recommendations for how to manage mood with food, information on nutrients beneficial for brain health, and recipes for incorporating beneficial foods into their diet.
- By March 21st, 2020, we will increase awareness and knowledge of nutrition related to brain health and wellbeing in a sample of current Allard Law students by giving them the developed infographic and relevant multimedia resources, which will be evaluated by a follow-up survey.

Medium Term Objectives (1-5 years)

- By the end of 2022, use student feedback to build and grow a supportive social network page to at least 100 students, designed for Allard law students to share ideas and encourage positive nutrition and wellbeing behavior.
- By the end of 2024, double the number of nutrition and wellbeing resources available for Allard Law students by collaborating with other campus organizations, such as the Alma Mater Society (AMS) and UBC Food Services, to increase access to support services and provide law students with more nutritious food options.

Long Term Objectives (5+ years)

- Increase reports by Allard Law students of positive wellbeing, knowledge and awareness of healthy nutrition-related behaviors, and accessibility and utilization of on-campus resources.

Project Outputs

Interviews and Surveys

We recruited students by coordinating with Anna Kline to promote participation through her weekly email blast, a blurb in the weekly newsletter, and a post on the Allard Facebook group (See Appendix D). In the promotional material, we provided nutrition tips which optimize brain health, cognitive function, and mood. We focused on brain health to motivate the law students to participate, as we assumed that they would want to learn more about methods to optimize their performance due to their program's rigorous nature. We also incentivized participation with winning one of two \$50 prizes, which Allard Wellbeing funded. Lastly, we included a link to a google form where we collected information for those interested in participating, including their names, emails, phone numbers, availability, and preferred communication method (Zoom or phone call). After this, we contacted the 36 students who registered and successfully booked 32 students for an initial 20-minute interview.

The initial interviews were booked between March 1st and March 7th. We intentionally chose these dates because our community partners informed us that they would experience decreased workload during that week. Therefore, the law students would be able to commit to participating. The questions were developed beforehand (See Appendix E) and made into a Google Form. The form was filled out by the interviewers when speaking to the participants over Zoom or phone calls. The questions were developed to align with the SCT by addressing personal factors (e.g., how important is it for you to prioritize your health and wellbeing at this moment?), behaviour (e.g., how likely is it for you to miss or delay meals when you feel you are pressed for time?), and environmental factors (e.g., state your level of agreement to the following statement: the food choices on campus are affordable). The answers to these questions contributed to our situational assessment, as they provided us with baseline information regarding the current state and opinions of our target population.

After the initial interviews were completed, we sent our nutrition-related materials to all of the participants. Then, we sent out an email to all of the participants with the link to the follow-up survey on a Google Form. We gave them one week, from March 15th to March 21st, to fill out the surveys at their leisure. We chose to do the follow-up survey

asynchronously to provide more flexibility for the students participating. Questions in the follow-up survey (See Appendix F) also aligned with the SCT and contained similar questions to the initial interview questions. This was done to help us evaluate our short-term outcomes through any changes to personal factors (e.g., please state your agreement to the following statement: the presented materials have increased my confidence to make healthy food choices) and behaviour (e.g., do you plan to implement any of the changes presented in the informational materials? Why or why not?) The survey also contained open-ended and closed-ended questions regarding their opinions of the materials provided to inform our evaluation of process indicators.

Nutrition Resources

For this project, we found two YouTube videos that were concise, engaging, and informational. We also developed nutrition-related infographics. The students could review the nutrition resources any time between March 8th to March 21st or until they submitted their follow-up survey. This was done to decrease the level of commitment required and accommodate the students' busy schedules. We also chose to share the resources asynchronously instead of conducting a scheduled virtual informational session since students would be less likely to participate in Zoom programming events due to "Zoom fatigue" and the additional time commitment required. We chose the media of short videos and visual infographics to make the information easily digestible, requiring minimal reading to keep the students engaged. We did this because our situational assessment research suggested that students would not want heavy readings since they already do many readings for school.

The two YouTube videos covered specific nutrients beneficial for brain health (Mind, the mental health charity, 2018) and the science behind how nutrition impacts brain health (TED-Ed, 2016) (See Appendix G). We also developed nutrition infographics that reiterated the videos' main points and covered eating habits to improve wellbeing and cognitive performance, nutrients essential for brain health, and relevant recommendations from Canada's Food Guide. As mentioned earlier, we tailored our material to our target population by providing nutrition information related to brain health that directly relates to their academic and work performance.

Example eating habits for improving wellbeing included regularly eating throughout the day, limiting alcohol and caffeine consumption, and eating a variety of fruits and vegetables. We highlighted nutrients beneficial for brain health, such as omega-3 fatty acids, folate, and thiamin. We also chose to include Canada Food Guide recommendations since our situational assessment revealed that most students did not know what they were, limiting food literacy. Lastly, we provided four easy-to-prepare recipes that incorporated the highlighted foods and nutrients. Anna Kline reviewed the infographics to ensure the quality and relevancy of the nutrition information and suggestions. After receiving Anna's feedback, links to the youtube videos and all of the nutrition infographics were emailed to the 32 participating students.

The materials sent out to the students were designed to address the different constructs of the SCT through increased food literacy and nutrition knowledge. This would affect behaviours by promoting a balanced diet (e.g., creating a varied meal plan), improved food choices (e.g., knowledge of which foods to incorporate or minimize), and the evaluation of diet quality (e.g., to what extent are they following CFG recommendations). This addresses the construct of **reciprocal determinism**, which describes the interconnected effects of personal, behavioural, and environmental factors. We recognize that providing and improving nutrition knowledge alone is insufficient to induce behavioural changes (National Cancer Institute et al., 2005). However, it has the potential to affect individual values, beliefs, and cognitions, which may inspire them to pursue further action and advocate for a more supportive nutritional **environment**, such as increased availability of healthy food choices on campus. The materials also aimed to improve their **behavioral capability** by providing them with easy-to-prepare recipes, which would improve their skills required to engage in healthy behaviours. They also helped set **relevant expectations** by explaining the expected positive effects from healthy behaviours, such as feeling increased energy during the day by regularly consuming meals and snacks, and the adverse effects of unhealthy behaviors, such as the decreased ability to concentrate due to dehydration and the inadequate consumption of water. By experiencing these positive and negative effects, students may experience **reinforcement**, as experiencing the positive effects of healthy

behaviours, like increased energy levels, can reinforce the healthy behaviour of eating regularly, making it more likely to happen again. Furthermore, they were designed to improve their perceived **self-efficacy** because having more knowledge and applying nutrition strategies that improve their brain health and wellbeing can increase the students' perception that they can take charge of their own health and behaviours, despite external factors and stressors.

Summary and Recommendations Document

Finally, we created a summary and recommendations document (Appendix H) that was emailed to Anna Kline at the end of the term to be used for future wellness programming. The document included key findings from the initial interviews, such as the percentage of students have never utilized any wellbeing services, students' opinions regarding prioritizing their health and wellbeing, and additional concerns that they had. It also contained a summary of the follow-up survey, including the students' opinions on the resources provided. These key findings were essential for our program evaluation of short-term outcomes. However, due to the limited duration of our direct involvement in the program, we used the key findings to shape our recommendations that address the medium-term objectives of the program.

We addressed medium-term objectives by recommending creating a supportive social media page, since students expressed that they would like to see some form of social network to quickly and effectively share content like recipes, short videos, and tips. We also recommended Anna and the Allard Wellbeing Team diversify their wellbeing resources and continue collaborating with interdisciplinary faculties, such as LFS, to create new programs, activities, and resources to keep law students interested in nutrition. Specifically, we recommend collaborations and programs that increase accessibility to nutritious food on campus studies show that a higher number of food destinations within 400 meters of their home is associated with higher diet quality scores in Canadian adults (Mcinerney et al., 2016). Lastly, we recommended specific nutrition content that would interest the students, such as those that help prepare nutritious meals on a tight schedule. Overall, following the recommendations to build an online supportive social environment and increase available resources will provide an

opportunity for direct positive reinforcement when students see their peers also participating in more health-oriented activities (observational learning).

Evaluation Plan

Evaluation of short-term objectives were implemented, while evaluation for medium and long-term objectives are proposed below.

Short-term: The first short-term objective of creating infographics for law students was achieved, as we had created and distributed 5 infographics that outlined how to manage mood with food, information on nutrients beneficial for brain health, and recipes for incorporating beneficial foods into their diet. The infographics and videos were distributed and reviewed by the law students prior to completing a post-intervention Google forms survey, which would evaluate our second short-term objective of increasing awareness and knowledge about nutrition and brain health. To align with our chosen health behaviour model, the design of our follow-up survey questions focused on the self-efficacy, goals, outcome expectancies, and social environment of law students regarding nutrition and brain health (See Appendix I). For example, we asked students to state their agreement to the statement "I feel I have great control over my health" to assess the student's level of self-efficacy in improving their own health and wellbeing. The law students were given 6-7 days to complete and submit the post-intervention survey to accommodate their busy school schedules.

An indicator for the second short-term objective would be the percentage of students who report increased awareness and knowledge of nutrition and brain health. From our follow-up surveys, 96% of students reported having knowledge about nutrition and brain health, compared to 84% of students in the pre-intervention interview, which showed an increase of 12%. The law students also reported that learning about the science behind nutrition and brain health increased their chances of engaging in healthy eating behaviours to boost their brain health and wellbeing. The results of this post-survey helped to determine that our infographics intervention was effective in achieving our short-term objective of increasing awareness and knowledge of nutrition and brain health.

Medium-term: The first medium-term objective of creating and growing members of a supportive social network page will be evaluated by whether or not students have joined. A possible indicator would be the number of students who have officially obtained membership within the social network group. The effectiveness of this objective can also be measured by the level of activity in the group, such as the number of posts or comments that are created to share ideas on how to improve overall health and wellbeing.

The second medium-term objective of doubling the number of nutrition and wellbeing resources available for Allard law students will be evaluated by whether or not there are nutrition-related resources and activities made available for law students. An indicator for this could be the number of resources that are promoted and offered to law students in the weekly Allard email newsletter and the number of students that access different resources available. Another indicator could be the total quantity of nutritious food options offered by the Allard Law Cafe, as well as other food service locations that are within close proximity to the law building, such as the AMS Nest.

Long-term: Evaluation of our long-term objective will be done with short 15-20 minute surveys conducted by the Allard Wellbeing Team on an annual basis over the next five years. To encourage participation amongst busy law students, they will be given a period of 1 week to complete the 15-20 minute survey. An indicator for this objective would be the percentage of students who report positive wellbeing, knowledge, and awareness of healthy nutrition-related behaviours in the surveys. The questions should be targeted on nutrition knowledge and behaviours of law students, as well as their engagement and utilization of on-campus resources to determine overall brain health and wellbeing. An example of a closed-ended survey question could be "How likely is it for you to skip meals when you feel you are pressed for time?" with options extremely likely, very likely, likely, not likely, and never, to assess the student's awareness of their own nutrition-related behaviours.

Conclusion

Key contributions: Our project aimed to meet the interests and learning needs of the Allard Law students while advocating for their holistic wellbeing. The situational assessment allowed us to learn about the students and was achieved via meetings with our community partners and conducting two surveys to assess knowledge before and after program intervention. Data collected informed the preparation of tailored infographics and videos to address learning on how food impacts brain and mental health. Follow-up survey data indicated the achievement of learning outcomes and desirable changes in personal health beliefs, goal setting, improved measures for self-efficacy, and overall new knowledge attained.

Lessons learned: For one, law students experience significant academic pressures and have limited time for extracurricular activities. Learning tools such as workshops and presentations were deemed unfavourable, and therefore, students may prefer asynchronous activities, offering greater flexibility for self-directed learning. In addition, our biases led us to believe that law students prioritize their academics over their health. However, a majority (60%) of students stated that their health is important to them, particularly in the state of the current pandemic. As a result, we learned that it is necessary to eliminate biases and assumptions before they are confirmed, as this could affect the coordination of the projects and interactions with students.

Next steps/Recommendations: Our project was primarily focused on nutrition recommendations for brain/mental health and did not address law students' limited time capacity to focus on their health. As suggested, further learning activities for law students can include preparing nutritious meals on a tight schedule. As our project was brief, we aimed to achieve short-term outcomes. Further evaluation should be done to determine if medium and long-term outcomes are being met. We recommend further collaboration with future FNH 473 course students and additional surveys or nutrition-related program activities which can further assess these desired outcomes. Greater support and advocacy for health received by the faculty of law can facilitate these interactions. Ultimately, we foresee that prolonged exposure to and continual practice of suggested recommendations for healthy habits will directly help reach the program's long-term objectives of seeing law students experience improved wellbeing, accessibility

and utilization of resources provided by UBC and Allard Wellbeing.

Authors' Contributions

| NAME | TASKS |
|------|---|
| AC | <ul style="list-style-type: none"> ● Conducted the majority of initial interviews with Law students ● Wrote the newsletter style brief that conveys group's learning experience ● Wrote the evaluation plan and organized the appendices of the written report ● Reviewed and selected 2 youtube videos on nutrition and brain health for law students to view along with the infographics |
| FA | <ul style="list-style-type: none"> ● Contributed to the logic model draft presentation ● Wrote the executive summary and introduction of the written report ● Made comments on pre and follow-up survey questions |
| GH | <ul style="list-style-type: none"> ● Led the meeting with Natalia Mioduszewski, Director of Wellness at the Law student society ● Facilitated zoom meetings with community partner, Anna Kline. ● Contributed to the logic model draft presentation ● Wrote the limitations portion of the situational assessment and drafted project outputs in the written report |
| LL | <ul style="list-style-type: none"> ● Led the meeting with Magal Huberman, Director of Wellness of the Graduate Law Student society. ● Drafted the important dates/deadlines document indicating project deliverables ● Wrote the situational assessment and planning framework portion and the health behavioural model portion of the written report ● Researched the content and summarized videos on brain health to include on the infographic ● Wrote the authors contributions and looked over citations and references of the report |
| MM | <ul style="list-style-type: none"> ● Group liaison with community partner Anna Kline, Allard Student Wellbeing Counsellor ● Helped conduct initial interviews with 8 law students. ● Laid out the content and finalized the final version of the nutrition infographics. Sent emails that contained the nutrition resources and follow-up surveys to participants. ● Added visuals and finalized formatting of the final presentation. ● Analyzed the results of the initial and follow-up survey responses and wrote the summary and recommendation document for suggestions on future programming. ● Drafted the project goals & objectives and project outputs of the written report and final presentation. Revised and provided feedback for Situational Assessment. |
| SS | <ul style="list-style-type: none"> ● Drafted both the initial interview questions and post-survey questions ● Contributed to the logic model draft presentation; organized information and formatted the presentation slides ● Wrote the mediating factors, revised the situational assessment portion and wrote the conclusions portion of the written report. Added to recommendations for project outputs |

All members of the group worked on the delivery of the logical model presentation, the final project presentation as well as editing and approving the final written report.

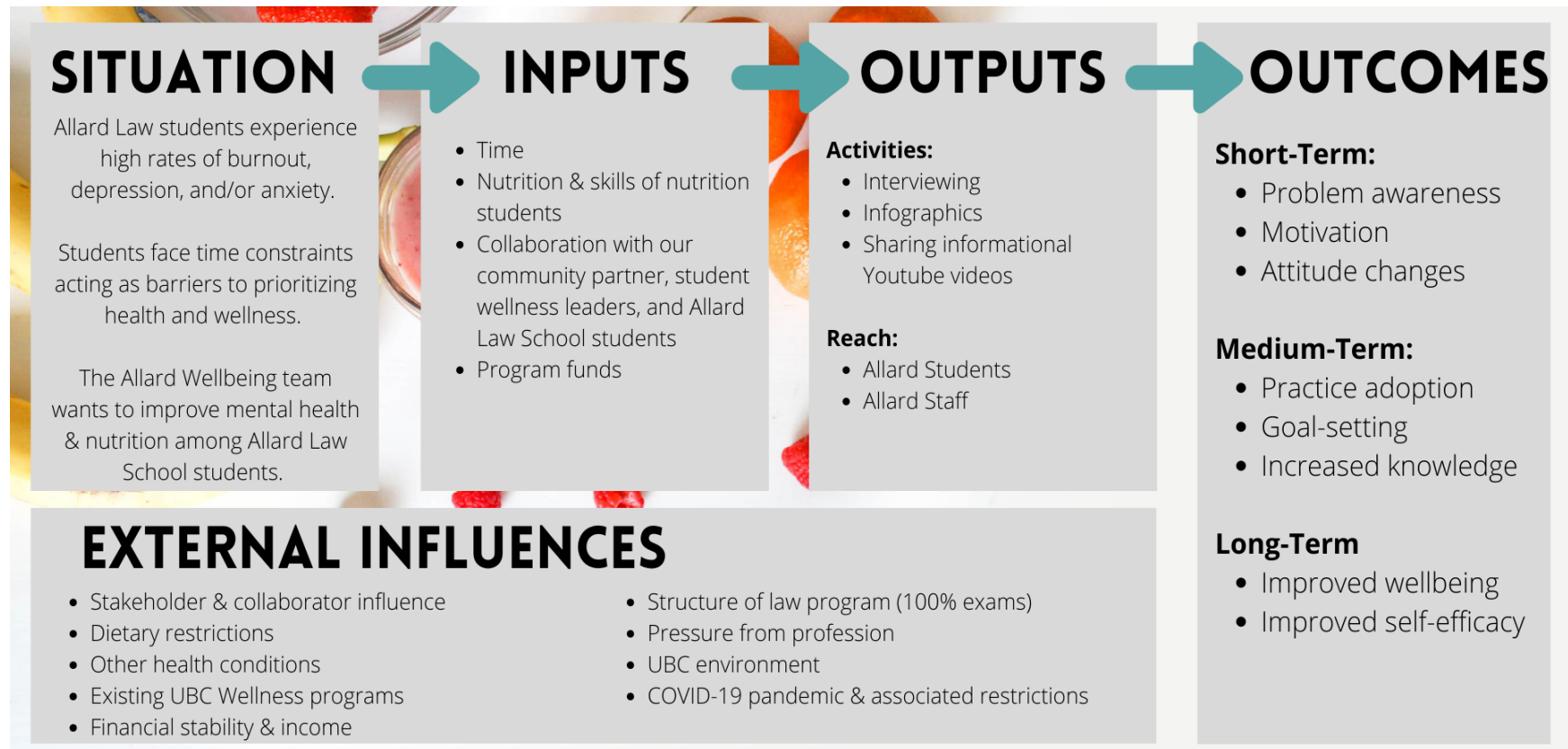
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Appendix A: Logic Model



Appendix B: Newsletter on Group's learning experience

ALLARD WELLBEING

Improving the health wellbeing of Allard law students



THE PROJECT

Six UBC students from the faculty of Land and Food Systems collaborated with Social Ecological Economic Development Studies (SEEDS) and the Allard Wellbeing team to improve the health and wellbeing of Allard law students.

Infographic style handouts were created as resources, which provided nutrition tips for law students on how to improve brain health, mood and optimize cognitive performance.

WORKING WITH ALLARD WELLBEING

The Student Wellbeing Counsellor, Anna Kline, provided endless guidance and support, which contributed to the project's success. She was always very encouraging and open to helping out in any way that she could. Allard Wellbeing goes above and beyond in providing care and support to Allard law students. Likewise, the program planning group received nothing less.



WHAT WAS LEARNED



Diving into this project provided great insight into the difficulties that law students are facing with regards to prioritizing their health and wellbeing, with barriers ranging from lack of knowledge to class schedules conflicting with meal times. Additionally, the nutrition knowledge that law students possess fall on a wide spectrum, as some were very informed while others were less informed.

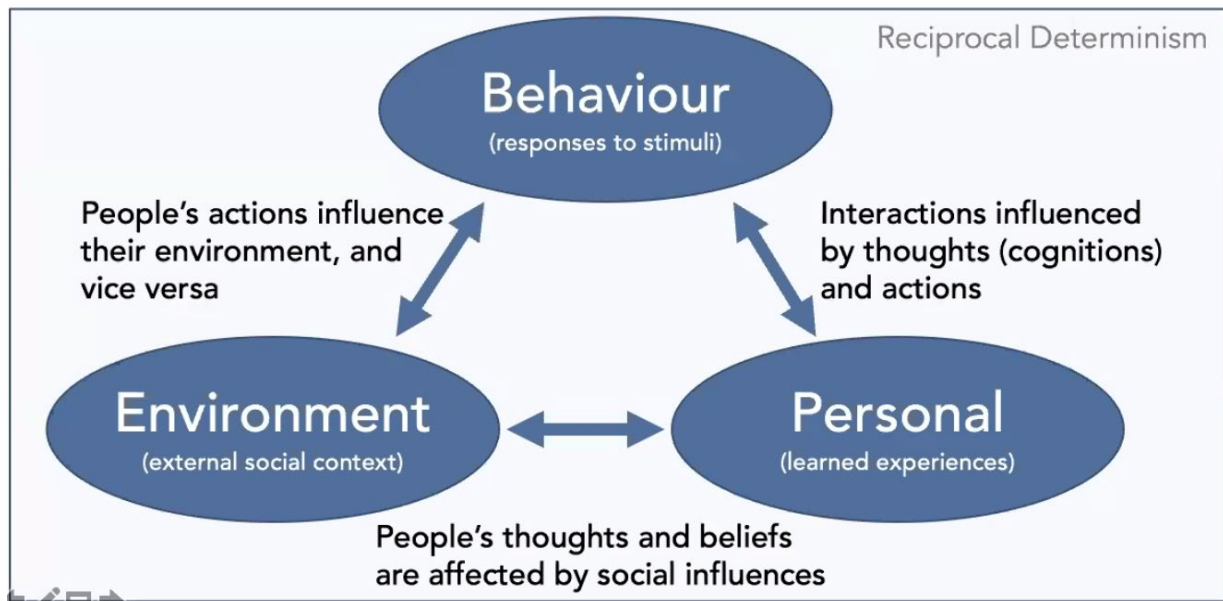
The planning group learned about the effectiveness of collaborative teamwork. Each group member had their own set of skills to bring to the table. By knowing the strengths of each group member, it allowed team members to work synergistically and to build momentum in creating a strong group dynamic.

CONNECTING TO PUBLIC HEALTH NUTRITION

Planning this public health project brought to light the complexities of addressing public health issues in the presence of systemic or structural barriers. Considering these barriers along with other social determinants of health can be a handful to juggle, especially when many of these hurdles are beyond the scope of what program planners can do. Planning programs also requires a considerable amount of time and effort, but seeing the progress being made can be a rewarding experience.



Appendix C: Social Cognitive Theory (SCT)



A visual representation of reciprocal determinism: how the three main components of the SCT (personal, behaviour, and environment) interact through the theory of planned behaviour (Hammond, 2021)

Appendix D: Interview/Survey Recruitment Materials

Email Blast Promoting Content:

We are UBC Food, Nutrition & Health students collaborating with SEEDS and Allard Wellbeing to bring you **nutrition tips for optimizing brain health, cognitive function, and mood...** But we need your help!

We are looking for Allard Law students to participate in two short phone/Zoom interviews about your overall wellbeing, nutrition, and brain health as a law student. They will last 10-20 minutes each and can be done on a flexible schedule!

Complete this google form by Sunday, February 28th to register for a chance to win a prize of \$50 :) - <https://forms.gle/HRjqQLywQEwndPRS8>

Newsletter Blurb:

Are you feeling lucky!? Participate in two short interviews about nutrition and wellbeing, and learn how to improve cognitive function through food for a chance to win a prize of \$50! The interviews can be done on a flexible schedule. Complete this google form by Sunday, February 28th to register:

<https://forms.gle/HRjqQLywQEwndPRS8>

Facebook Post:



The image shows a Facebook post from the UBC Graduate Law Students' Society (GLSS). The post features a promotional graphic for a survey. The graphic has a white background with green and orange accents. At the top, it says "SEEDS X UBC FNH STUDENTS" in green. Below that, in large green letters, is "NUTRITION & WELLBEING RESEARCH". Underneath, it asks "Are you a law student?? Come participate in in our research about nutrition and brain health!". At the bottom, a white box says "Sign up for your chance to win 1 of 2 \$50 prizes!". The background of the graphic is a collage of images: green lemons, blueberries, and orange slices. To the right of the graphic, the post text reads: "Win a \$50 prize of your choice and learn about nutrition tips for optimizing brain health, cognitive function and mood." Below that, it says: "UBC Food, Nutrition & Health students collaborating with SEEDS and Allard Wellbeing need your help! Participate in two short interviews about your overall wellbeing, nutrition, and brain health as a law student and learn how to improve cognitive function through food. The interviews are 10-20 mins long and can be done on a flexible schedule." At the bottom, it says: "Email Anna Kline akline@allard.ubc.ca to be sent the registration link and complete by Sunday, February 28th to be in the running to win one of 2 \$50 prizes. See Less".

glss UBC Graduate Law Students' Society (GLSS)
February 23 · 🌐

Win a \$50 prize of your choice and learn about nutrition tips for optimizing brain health, cognitive function and mood.

UBC Food, Nutrition & Health students collaborating with SEEDS and Allard Wellbeing need your help! Participate in two short interviews about your overall wellbeing, nutrition, and brain health as a law student and learn how to improve cognitive function through food. The interviews are 10-20 mins long and can be done on a flexible schedule.

Email Anna Kline akline@allard.ubc.ca to be sent the registration link and complete by Sunday, February 28th to be in the running to win one of 2 \$50 prizes. **See Less**

Appendix E: Nutrition Interview #1 Questions

Current Year Standing

- JD 1L
- JD 2L
- JD 3L
- Graduate

Please select the UBC Wellbeing Services that you use or attend (Before and after COVID)

- Counselling services (Allard Law or UBC Counselling Services)
- Psychoeducational workshops (Allard Law)
- Support items (E.g., booklets, stress relievers, coping cards, tea cards, chocolate, massage chairs, etc.) (Allard Law)
- Lawyer mentors and wellbeing stories (Allard Law)
- UBC Recreation services
- None of the above
- Prefer not to answer

How often do you access services provided by UBC or Allard Wellbeing (Before and after COVID)

- Never
- 1-3 times per month
- 4-6 times per month
- More than 6 times per month
- Prefer not to answer

How would you rate the support received from the Allard Wellbeing Services team?

Extremely poor (1) (10) Exceeds Expectations

How would you evaluate your overall health?

- Excellent
- Good
- Moderate
- Poor
- Extremely poor

How likely is it for you to miss or delay meals when you feel like you are pressed for time?

- Extremely likely
- Very likely
- Likely
- Not likely
- Never

The majority of the meals I consume are:

- Prepared by myself
- Prepared by a family member, friend, roommate or peer

- Prepared by fast food or takeout services
- Pre-prepared from grocery stores (e.g., Superstore, Whole Foods)
- Prepared by restaurants
- Other: _____

Do you purchase prepared meals from stores on campus? If so, which ones? (Before and after COVID)

Please state your agreement to the following statements:

| | Strongly Disagree | Disagree | Somewhat Disagree | Neutral | Somewhat Agree | Agree | Strongly Agree |
|---|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| I am confident in my ability to make healthy food choices daily. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I set food and nutrition goals often. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I am knowledgeable on the subject of nutrition and how it relates to my overall health and wellbeing. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I am conscious about my eating habits. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I feel I have great control over my health. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| My health is important to me. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I follow the Canada Food Guide recommendations. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I enjoy trying new foods. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I feel supported by my friends, family, peers, and colleagues when making healthy food choices. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I often have my meals in the company of others. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

- I consume what is readily available at home or prepared by my family/friends/peers.
- The food choices on campus are affordable.
- There are a variety of food choices on campus.
- I am satisfied with the food choices available on campus.
- The groceries near or on campus offer enough affordable ingredients to prepare healthy meals.
- It is easy for me to set aside time each week to prepare my meals.
- I enjoy preparing meals for myself.
- I actively engage in social media or support groups that advocate for healthy food and nutrition.

How often do you consume fruits and vegetables?

- More than once per day
- Once per day
- 2-4 times a week
- Once a week
- Never

How often do you consume dairy products/milk alternatives and whole grains?

- More than once per day
- Once per day
- 2-4 times a week
- Once a week

Never

With respect to nutrition, which of the following broad topics would you be interested in learning more about?

- Impact of nutrition on academic performance
- Impact of nutrition on mental health
- Impact of nutrition on physical health
- Impact of nutrition on social health
- None of the above
- Other: _____

Which of the following specific topics would you be interested in learning more about?

- How to incorporate ingredients that support brain health
- How to prepare easy and nutritious meals
- Which nutrients are important from brain health
- How nutrients can impact our mental health and wellbeing
- Strategies to prioritize health and wellbeing
- Strategies to manage time and meal preparation
- Reading Nutrition labels
- None of the above
- Other: _____

Do you set goals for yourself to eat healthy foods weekly? If yes, what are they? What made you decide to set these goals? Are there any barriers that prevent you from being able to meet these goals?

Do you have any additional priority concerns/goals related to your health and wellbeing?

How important it is for you to prioritize your health and wellbeing at this moment?

How easy or difficult would it be for you to implement changes once you learn about them? Why do you believe so?

What do you hope to gain from participating in this program/learning experience?

Are there any additional thoughts or concerns you would like to share regarding your health and wellbeing as a law student?

Appendix F: Nutrition Survey #2 Questions

Current Year Standing

- JD 1L
- JD 2L
- JD 3L
- Graduate

Please select the materials that you reviewed:

- Nutrition infographics
- Video 1: How the food you eat affects your brain
- Video 2: How to manage your mood with food

Is this your first time reviewing information presented by the UBC Allard Wellbeing Team? (Before and after COVID):

- Yes
- No

Please state your agreement to the following statements:

| | Strongly Disagree | Disagree | Somewhat Disagree | Neutral | Somewhat Agree | Agree | Strongly Agree |
|--|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| The presented materials have increased my confidence to make healthy food choices. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| As a result of the infographic and video materials, I will aim to set 1 or more goals to improve my wellbeing. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I am more aware of how nutrition affects my health and wellbeing. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I am more conscious about my eating habits. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I feel I can better take control of my health. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I believe that my health is | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

more important to me now than it was before.

Variety in food choices is important.

I am more willing to follow the Canadian Food Guide recommendations.

I am more open to trying new foods.

I will engage in having meals with others more often.

I would like to explore cooking more meals at home.

I feel I am able to make more food choices that are affordable or budget-friendly.

I feel confident that I can incorporate 2 or more of the strategies (mentioned in the videos) into my daily lifestyle.

I believe I can manage some time each week to prepare healthy meals.

I believe I could enjoy preparing meals for myself.

I will incorporate at least 1 of the strategies mentioned in the videos into my daily lifestyle.

The information provided inspires me to join support groups that advocate for food, nutrition, and wellbeing.

The information provided

was practical.

The information provided was useful.

The information was presented in an engaging format.

I am able to make more informed wellbeing choices as a result of this presentation.

What are some new foods/ingredients which you have incorporated in the past 1-2 weeks?

- Yogurt (ie. Yogurt Parfait Recipe)
- Oats/Oatmeal/Granola
- Salmon/Other fish
- Tofu (ie. Orange Soy Tofu recipe)
- A healthy fat (ie. sunflower oil, olive oil, walnut oil) -usually fat that is liquid that at room temperature
- Nuts & Seeds
- None of the above
- Other:

Please rate the quality of the materials presented:

Low Satisfactory Neutral Good Very good

Please rate your overall experience with watching the videos and reading materials:

Extremely poor experience (1) (10) Exceptional experience

Did the infographics and videos meet your expectations? Why or why not?

What are some new things you learned from watching the videos or reading the infographics?

Are there any additional pieces of information that you would have liked to see included in the videos/infographics?

Do you plan to implement any of the changes presented in the informational materials? Why or why not?

Did the information presented help answer some of your nutrition and wellbeing-related concerns? If yes, which? If not, what were you looking for?

What was the most important takeaway for you from this experience?

What could be improved to make this a better experience for other law students?

Please share additional comments, thoughts, or concerns regarding your experience participating in this activity.

To be entered into the prize draw, please leave your name and email address below:

Appendix G: Nutrition Resources Provided to Law Students

Supplemental Youtube Videos:

1. [How the food you eat affects your brain - Mia Nacamulli](#) (4m 52s)
2. [How to manage your mood with food | 8 tips](#) (3m 23s)

Infographics:

GOOD FOOD FOR A GOOD MOOD

A GUIDE FOR IMPROVING COGNITIVE FUNCTION AND WELLBEING

EAT REGULARLY THROUGHOUT THE DAY

Eating every 3-4 hours keeps your blood sugar levels steady, helping you maintain a steady amount of energy throughout the day. If blood sugar levels drop, you may feel more tired, irritable, or experience low mood. Try to eat 3 meals per day and 2 snacks. *(Set alarms, meal prep, or have snacks nearby to remind you if you find yourself often forgetting!)*

EAT HIGH-QUALITY PROTEIN FOODS

High-quality proteins release energy more slowly, help with satiety, and also, help keep energy levels steady. Try incorporating more of these high-quality protein choices into your diet: nuts, seeds, oats, whole grains, legumes, lean meats, fish, eggs, peas, and beans.

EAT THE GOOD TYPES OF FATS

Essential fats such as omega-3 and omega-6 fatty acids must come from the diet and should not be missed! They are important precursors for hormones and substances which help maintain the integrity of vital brain structures, helping with cognitive function. These foods are great sources of healthy fats: oily fish, nuts (e.g. walnuts & almonds), olive & sunflower oils, sunflower/pumpkin seeds, avocados, dairy, and eggs.

DRINK PLENTY OF FLUIDS

Fluids help prevent constipation and dehydration. Mild dehydration can impair mood and brain function. Remind yourself to drink more water by using reminder apps on your phone, bringing a large water bottle with you everywhere you go, or drinking from a tumbler that has a straw in it to drink water as you continue to do work. If you don't enjoy drinking plain water, try herbal teas, diluted fruit juices, or fruit-infused water.

EAT A RAINBOW OF FRUITS AND VEGETABLES

Different colored fruits and vegetables contain a diverse range of vitamins, minerals, and fibers. There's no need for external supplements! More information on specific nutrients below. Aim to eat at least one dark green and one orange vegetable per day.

ENJOY CAFFEINE IN MODERATION

Having >400 mg of caffeine per day can contribute to anxiety and restlessness. Cutting down can cause withdrawal symptoms, so begin limiting intake slowly. Things to limit: coffee, some types of tea, chocolate, cola drinks, energy drinks.

GUT HEALTH = BRAIN HEALTH

The gut microbiome controls inflammation and is connected to the brain through chemicals and neurotransmitters. Gut distress can increase anxiety, stress, and depression. Keep your gut healthy by increasing your intake of fiber and probiotics. Consume plenty of fruits, vegetables, whole grains, and low-fat yogurt.

LIMIT CONSUMPTION OF ALCOHOL

Chronic alcohol consumption can impair memory and contribute to feelings of depression. Limit alcohol to 10 drinks/week for women and 15 drinks/week for men. When drinking, be sure to eat beforehand, and try drinking 1-2 glasses of water for every alcohol serving consumed (1 oz hard liquor, 12 oz beer, 5 oz wine).

Information sources
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 Harvard T.H. Chan School of Public Health. (2019). The Gut-Brain Connection. Retrieved from <https://www.hs-niederrhein.de/eng/health-and-wellness/health-and-wellness/limit-caffeine>

Important Nutrients for Brain Health

01 Omega-3 Fatty Acids

What it does: Supports cognitive processes; upregulates genes that promote synaptic function and plasticity (for learning and memory).
Foods: Fatty fish (salmon, mackerel, tuna, trout, sardines), Nuts & seeds (flax seeds, chia seeds, walnuts, hemp seeds, Plant oils (flaxseed oil, soybean oil, canola oil), Seaweed & Algae



02 Flavonoids

What it does: Reduces cognitive delay and improves memory formation; has antioxidant effects.
Foods: Cocoa, green tea, citrus fruits, red wine, dark chocolate



03 Thiamin

What it does: Involved in energy metabolism, nerve activity & muscle activity.
Important notes: Needed in frequent doses (3-3 days) since it is water-soluble and is not stored in the body. Decreased absorption with alcohol.
Foods: Pork, enriched whole grain products, legumes (e.g. split peas, lentils)



04 Riboflavin

What it does: Involved in energy metabolism, assists enzymes for the production of energy from carbohydrates, fat, and protein.
Important notes: Needed in frequent doses (1-3 days) since it is water-soluble.
Foods: Milk, enriched whole-grain products, dark green leafy vegetables (e.g. broccoli, asparagus, spinach)



05 Niacin

What it does: Plays a central role in energy transfer reactions, specifically in the metabolism of glucose, fat, and alcohol. It also plays a protective role against neurological degeneration.
Foods: Tuna, ground beef, chicken breast, mushroom, whole grains



06 Folate & Vitamin B12

What they do: Involved in energy metabolism; helps the cells multiply (including red blood cells and cells lining the GI tract, which are important for delivering energy).
Important note: Folate & Vitamin B12 deficiencies lead to neurological disorders such as depression & cognitive impairment.
Foods: Folate/Folic acid: Spinach, lentils, asparagus, broccoli. Vitamin B12: animal products (meat, fish, poultry, cheese, eggs)



Information Sources:
 Gómez-Pedraza, F. (2008). Brain health: The effects of nutrients on brain functions. *Nature Reviews Neuroscience*, 11(7), 548-576. <https://doi.org/10.1038/nrn2328>
 Mandel, S. A., Anis, T., Weisberg, D., Kozlowski, L., & Vanden, M. S. H. (2008). Simultaneous manipulation of multiple brain targets by green tea catechins: a potential neuroprotective strategy for Alzheimer and Parkinson disease. *CNS Neuroscience & Therapeutics*, 14(6), 522-534. <https://doi.org/10.1111/j.1755-5949.2008.01048.x>
 Whitney, E. N., Rolfes, S. R., Hatfield, G., & Piche, L. A. (2016). *Understanding nutrition* (2nd ed.). Nelson Education.

RECOMMENDATIONS

based on Canada's Food Guide

FAT IS GOOD

Do not restrict nutritious foods because of their fat content. Quality over quantity!

Choose **unsaturated fats** more often than saturated fats.

ENJOY MEALS & SNACKS

Aim to enjoy meals and snacks regularly throughout the day. It is recommended to have 3 meals and 1-2 snacks each day. Take the time to eat and appreciate foods with family and friends.

ALCOHOL

Consider reducing the consumption of alcohol. Alcohol can contribute a large portion of calories to the diet with little nutritional value. It may also contribute to excess free sugars or saturated fat when mixed with syrups, drinks with added sugar, or cream-based liquor.

FOLIC ACID & IRON

Women of childbearing age should be taking a **multivitamin** containing **folic acid**. Pregnant women need to ensure that multivitamin also contains iron.

Note: Consult a health care professional before making any changes to your supplements.

VARIETY

Have a variety of foods every day. Make sure each meal contains:

Vegetables and fruits - fresh, frozen, or canned options.

Smoothies are an easy way to incorporate these every morning!

Whole-grain foods - whole grain pasta, brown rice, and quinoa are good choices.

Protein foods - Choose protein foods that come from plants more often, such as tofu and lentils. Other high-quality protein foods include lean meats, fish, unsweetened milk & fortified milk alternatives.

Health Canada. (2019). The New Food Guide. Retrieved from <https://www.canada.ca/content/dam/hc-sc/documents/96000/96000canada-food-guide-revision-canada-food-guide-2019-eng.pdf>

NUTRITION LABELS

Be aware of and read the Nutrition Facts label on foods. Choose products with less saturated fat, trans-fat, sugar, and sodium.



TIPS FOR A BUSY SCHEDULE

Make a meal plan and layout snacks for the next few days in Tupperware or sandwich bags. Easy snacks that support brain health include nuts, vegetables, and fruits.

Have a list of **recipes readily available** that can be easily prepared, such as sheet pan meals or fruit/vegetable smoothies.

Avoid skipping meals! Skipping breakfast is associated with decreased cognitive performance, including memory, processing visual display, problem-solving, alertness, and attention.

RECIPES TO INCORPORATE
BRAIN FOODS
INTO YOUR DIET

RECIPES TO INCORPORATE
BRAIN FOODS
INTO YOUR DIET



1
Maple Nut & Seed Granola

Contains: seeds, nuts, & whole grains

Ingredients: *Yields 8 Servings*

- 2 ½ cups rolled oats
- ½ cup walnuts, chopped
- ½ cup pecans, chopped
- ½ cup pumpkin seeds
- ½ cup sunflower seeds
- 2 teaspoons cinnamon
- ½ teaspoon sea salt
- ½ cup melted coconut oil
- 1 teaspoon vanilla extract
- ½ cup maple syrup + 1 tablespoon

Instructions:

1. Preheat the oven to 350 F.
2. In a large bowl combine the dry ingredients; oats, nuts, seeds, cinnamon and sea salt.
3. In a separate bowl, combine the wet ingredients; coconut oil, vanilla extract and maple syrup (except extra tablespoon).
4. Add wet ingredients to dry ingredients and stir well to ensure everything is well combined.
5. Spread out the granola in an even layer on a baking sheet and transfer to the oven 25-30 minutes or until golden and crispy, stirring halfway through. Keep an eye on it to ensure it does not burn.
6. Once cooked, removed from the oven, and drizzle remaining tablespoon of maple syrup while it is still hot.
7. Allow to cool and store in a jar or airtight container for up to one week.
8. Enjoy!



2
Fruit & Yogurt Granola Parfaits

Contains: yogurt (probiotic), granola, fruits

Ingredients: *Yields 10 servings*

- 3 cups maple nut & seed granola
- 1 L (4 cups) plain or greek yogurt
- 750 mL (3 cups) fresh berries, such as raspberries, blueberries, or blackberries

Tips:

- Switch up the berries with other fresh fruit like chopped peaches or plums. Or, use frozen fruit.
- Transform the granola into a trail mix by adding cashews and dried fruit such as raisins and apricots.
- Little chefs can help assemble the parfaits layer by layer.

Instructions:

1. When ready to serve, divide half of the granola among 10 small glasses or parfait dishes. Divide yogurt among glasses and sprinkle with some of the fruit. Top with remaining granola and fruit and enjoy. Alternatively, cover and refrigerate for up to a day.



3
One-Pan Salmon & Veggies

Contains: Fatty fish, vegetables (asparagus)

Ingredients: *Yields 2 Servings*

- 2 lbs small red potato (910 g) or yellow, quartered
- 4 tablespoons olive oil
- Salt, to taste
- Pepper, to taste
- 4 cloves garlic, minced
- 4 tablespoons lemon juice
- 2 teaspoons ginger
- 2 salmon fillets
- 1 bunch asparagus, roughly 1 pound (455g)

Instructions:

1. Preheat the oven to 400F (200C).
2. Cover a sheet pan with foil or parchment paper. Spread out potatoes on the pan and drizzle with olive oil. Season with salt, pepper, 2 cloves of garlic, and 1 tablespoon lemon juice.
3. Bake for 30 minutes.
4. Make salmon glaze. Combine salt, pepper, 1 tablespoon thyme, 2 garlic cloves, ginger, 2 tablespoons of olive oil, and 2 tablespoons of lemon juice. Mix well.
5. Remove potatoes from the oven and push them to the top or side of your pan. Place your salmon fillets on the pan. Brush both sides of the salmon with the glaze.
6. Place asparagus on the pan and top with 1 tablespoon olive oil, 1 tablespoon lemon juice, salt, and pepper. Sprinkle 1 tablespoon of thyme on the asparagus and potatoes.
7. Bake for 10-12 minutes. (The salmon should flake easily with a fork when it's ready.)



4
Orange Soy Tofu Pockets

Contains: plant-based protein, vegetables

Ingredients: *Yields 6 servings*

- 1 pkg (350 g) extra firm tofu
- 2 mL (1/2 tsp) grated orange rind
- 45 mL (3 tbsp) orange juice
- 30 mL (2 tbsp) sodium-reduced soy sauce
- 10 mL (2 tsp) sesame oil
- 10 mL (2 tsp) grated fresh ginger
- 1 clove garlic, grated
- 1 mL (1/4 tsp) Sriracha chili sauce (hot sauce)
- 3 whole-grain pitas, cut in half
- 500 mL (2 cups) baby spinach
- 150 mL (2/3 cup) shredded carrot
- 6 small lime wedges

Instructions:

1. Cut tofu crosswise into 12 slices; set aside.
2. In a shallow baking dish, whisk together orange rind and juice, soy sauce, oil, ginger, garlic, and chili sauce. Add tofu and turn to coat evenly. Let stand for at least 15 minutes or cover and refrigerate for up to 1 day.
3. Reserving marinade, place tofu slices on greased grill over medium-high heat for about 8 minutes, cook, turning once or until golden and crisp. Remove from grill and toss with reserved marinade.
4. Fill each pita half with spinach and carrots and tuck in 2 tofu slices each. Squeeze lime juice over top.

RECIPES FROM:

[HTTPS://KAYNUTRITION.COM/MAPLE-NUT-SEED-GRANOLA/](https://kaynutrition.com/maple-nut-seed-granola/)
[HTTPS://FOOD-GUIDE.CANADA.CA/EN/RECIPES/FRUIT-YOGURT-GRANOLA-PARFAITS/](https://food-guide.canada.ca/en/recipes/fruit-yogurt-granola-parfaits/)

RECIPES FROM:

[HTTPS://TASTY.CO/RECIPE/ONE-PAN-SALMON-AND-VEGGIES](https://tasty.co/recipe/one-pan-salmon-and-veggies)
[HTTPS://FOOD-GUIDE.CANADA.CA/EN/RECIPES/ORANGE-SOY-TOFU-POCKETS/](https://food-guide.canada.ca/en/recipes/orange-soy-tofu-pockets/)

Appendix H: Summary and Recommendation Document Provided to Anna Kline

Pre-Intervention Interview Results

- 46.7% of students have not accessed wellbeing services (counselling services, psychoeducational workshops, support items, lawyer mentors & wellbeing stories, UBC rec)
 - **Recommendation:** Increase promotion and accessibility to these resources. Perhaps showing students that it is easy to sign up and access the services can show students that it is easy to get support.
- Weighted average rating (out of 10) of services provided by the Allard Wellbeing Team = 7.5
 - **Notes:** Some students expressed lower rating due to not having had accessed the services before
- A significant portion of students (13.3%) expressed that they bought food from the Allard cafeteria
 - **Recommendation:** Providing nutritious and affordable choices at the cafeteria can increase how much they consume the recommended foods. Partnering with places such as the Agora Cafe (located in the MacMillan building) to set up a synergistic supply chain (they make nutritious granola bars and other snacks which can be useful to include).
- Most students do value their own health and cook their own meals at home (especially now, with online school)
 - Other priority concerns related to health and wellbeing:
 - Getting enough sleep
 - Mental health/self-care/mindfulness
 - Exercising regularly
 - Deteriorating eye health due to looking at a screen all-day
 - Managing stress effectively
 - Reliance on caffeine and negative effects on health
- Prioritizing health and wellbeing:
 - Many said that it is very important to them, however, they believe they need to compromise it at times
 - “Important, but during certain times in the semester when school gets busy then my health isn’t as important”
 - “I’d say I know it’s very important but I feel like I compromise it.”
 - “As of right now, it’s important but not the top priority.”
 - “It’s so easy to kind of slack on these things. Thinking that if I take shortcuts (e.g. skip that meal, or skip out on sleep, although sometimes you kind of have to) and I feel like some of those are okay if they’re not that frequent, but nobody can sustain those types of habits, (it feels like it’s) not worth it (and) counterproductive in a way.”
 - “I want it to be important, but it’s not always realistic due to the workload in law school”
 - “Important, but my grade/rank is more important”
 - Many expressed that they have been able to cook more at home or take more care of themselves due to COVID-19. Many expressed that it’s extremely important to prioritize mental health during the pandemic.

Additional concerns students shared regarding their health and wellbeing as a law student

- Law school structure and the legal profession, in general, isn't conducive to a healthy lifestyle
- Workshops can be useful but the workload from school is a big barrier
- Contradicting nutrition information makes it difficult to know what to do
- Peer pressure has reduced due to online school (less anxiety since students are comparing experiences with other students)
- Unhealthy culture of the profession (e.g., alcohol consumption)

Recommendations for Allard Wellbeing

- Provide more programs/resources that encourage maintenance of a healthier lifestyle
- More support for graduate students

Summary of Follow-Up Survey Results

- 81% of students (26) who participated in the first interview responded to the survey
 - 6 students didn't respond to the 2nd survey
 - 4 students were graduate students
 - 2 were in JD 2L
- Materials reviewed:
 - 88.5% reviewed the nutrition infographics
 - 100% reviewed Video #1: [How the food you eat affects your brain - Mia Nacamulli](#) (4m 52s)
 - 92.4% reviewed Video #2: [How to manage your mood with food | 8 tips](#) (3m 23s)
 - **Note/Recommendation:** It seems like short videos can be a very effective way of conveying nutrition information to students
- Most students (53.8%) said that this was their first time reviewing the information presented by the UBC Allard Wellbeing Team
- Most students believed that the information provided was practical, useful, and engaging. 50% agreed that the information allowed them to make more informed wellbeing choices.
- Many tried to incorporate foods/ingredients from the recipes provided

Feedback on the Resources Provided

- Many said that it was concise, helpful, informative, etc.
- Some said that the information provided was commonly known already, and has become "de-sensitized" to information regarding healthier living
- Some did not agree with some of the recommendations provided

Recommendations for Content:

- Include results of studies
- More information about quantity/volume and time to see results
- Daily meal plan and more recipe recommendations
- More tips on meal prepping on a time and money budget
- Tips for good substitutes

- Tools for implementing changes to routines/habits
- Making it more applicable to law students (e.g., comparing good lifestyles with common law student lifestyles)

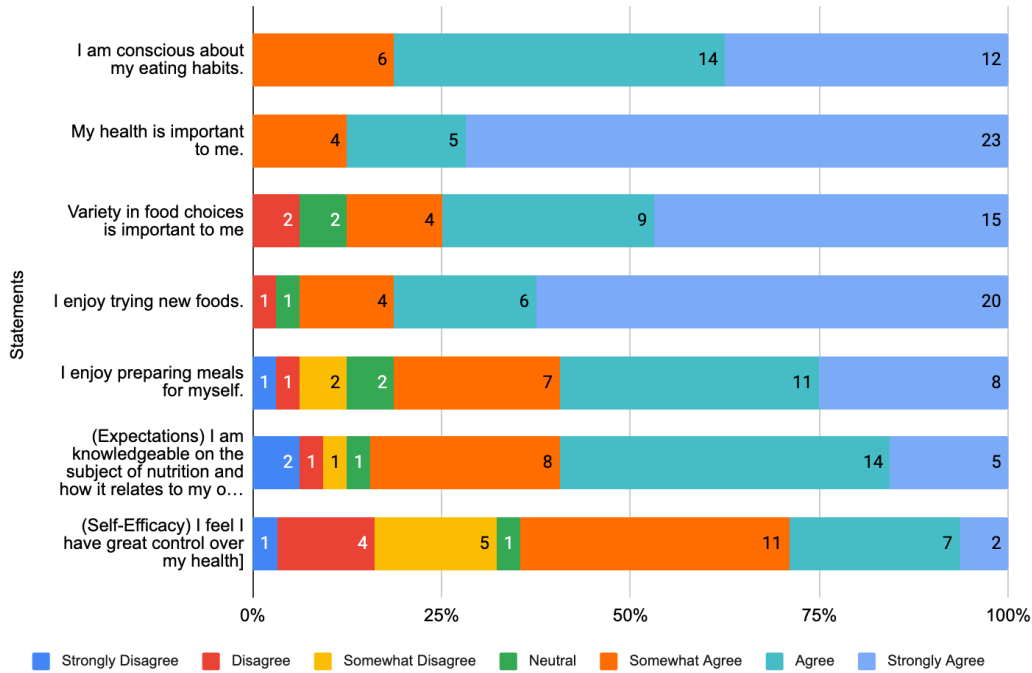
Recommendations for Experience & Future Direction

- Providing a summary of the content
- Continue sending out videos throughout the year, embedded in emails that are sent directly to students
- **A social network to keep sharing resources**

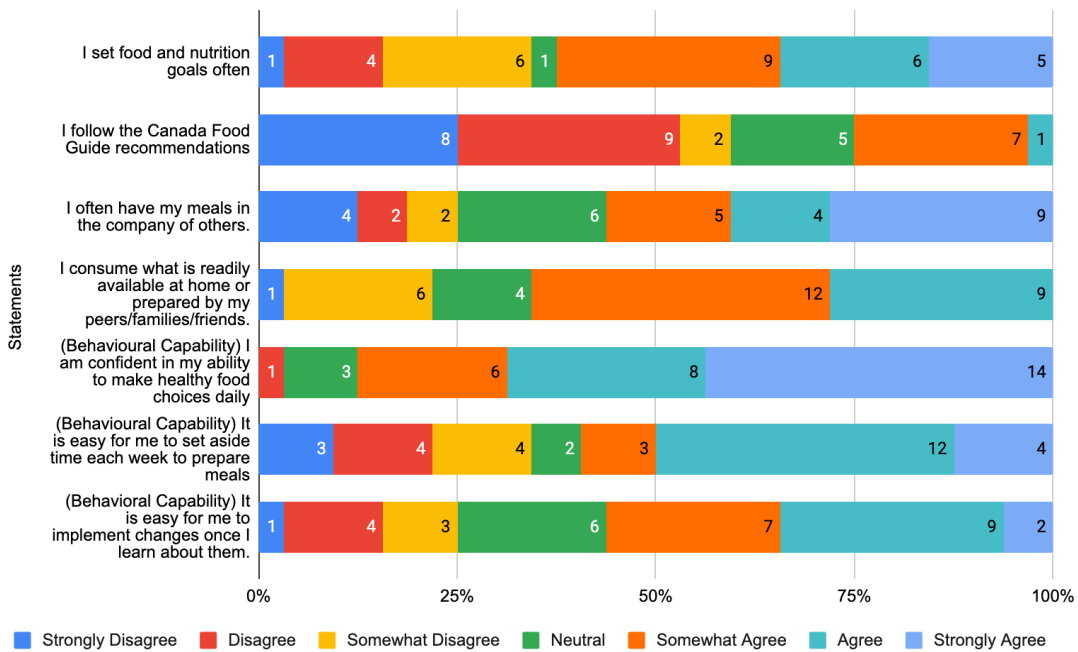
Appendix I: Interview and Survey Results

Initial Interview Results - Categorized by Components of Social Determinism

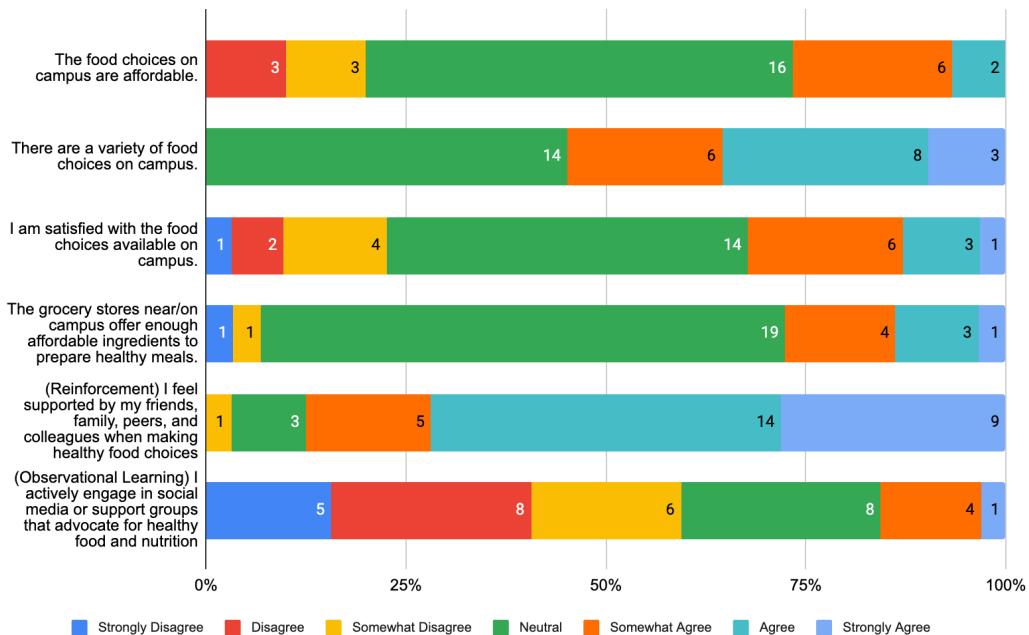
Level of Agreement with Statements Related to Personal Factors (Reciprocal Determinism)



Level of Agreement with Statements Related to Behaviour (Reciprocal Determinism)

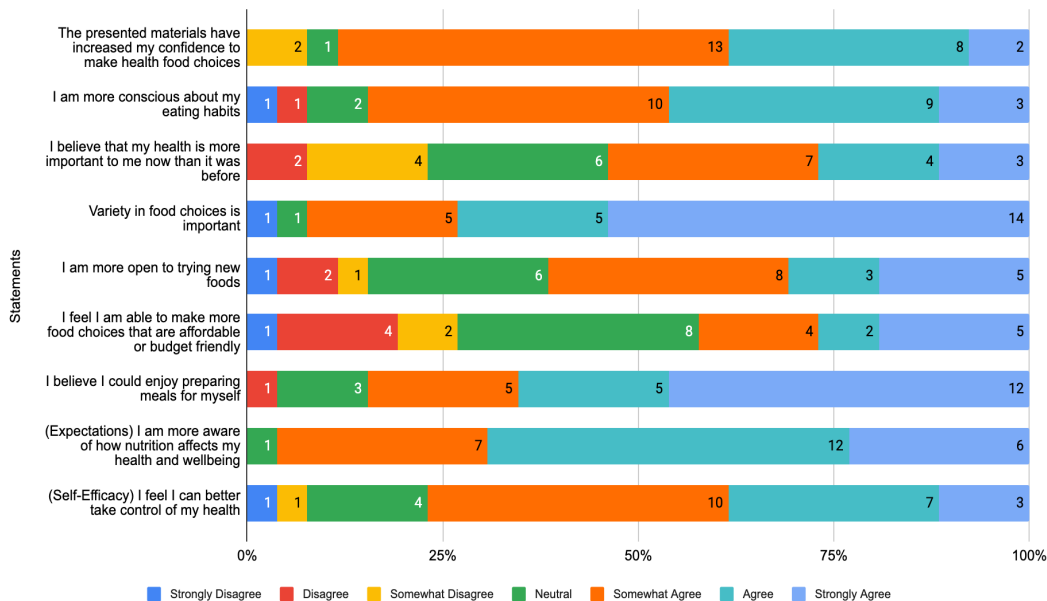


Level of Agreement with Statements Related to Environment (Reciprocal Determinism)

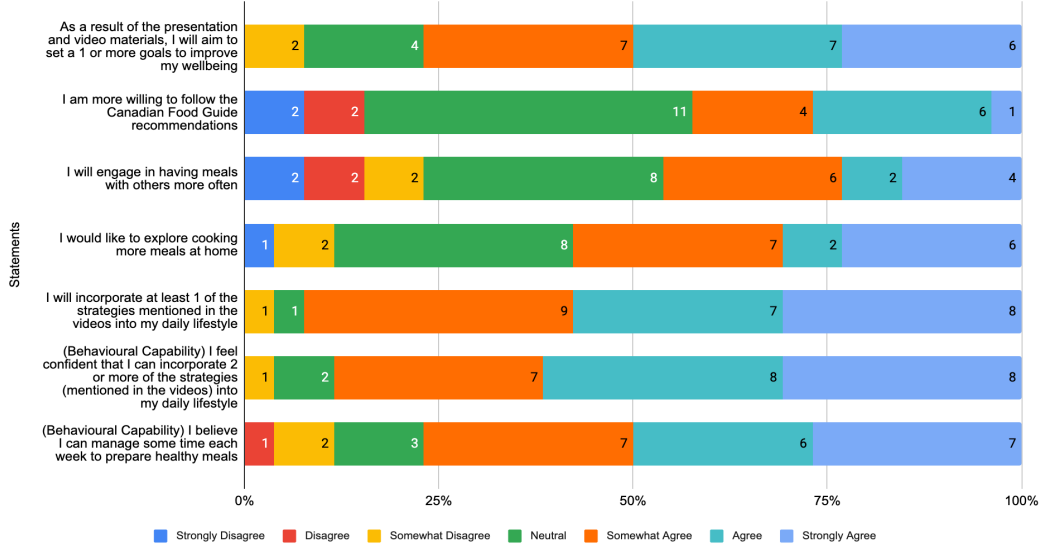


Follow-Up Survey Results - Categorized by Relationship to Reciprocal Determinism and Program Evaluation (Process Indicators)

Level of Agreement to Statements Regarding Personal Factors (Reciprocal Determinism)



Level of Agreement to Statements Regarding Behaviour (Reciprocal Determinism)



Level of Agreement to Statements Regarding the Program

