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Social Ecological Economic Development Studies (SEEDS) Sustainability Program

Student Research Report

Vendor Strategy for the Healthy Beverage Initiative (HBI)

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Social Ecological Economic Development Studies (SEEDS)

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UBC sustainability

Vendor Strategy for the Healthy Beverage Initiative (HBI)

TO INCREASE THE ACCESSIBILITY OF 'GREEN' BEVERAGES

April 26, 2021

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EXECUTIVE SUMMARY

PROJECT BACKGROUND

Given that sugar-sweetened beverages are the single-largest source of added sugar in the diets of youth and young adults in British Columbia (Czoli et al., 2019), the UBC Wellbeing Strategic Framework has a target of reducing the consumption of sugar-sweetened beverages by 50% by 2025. The Healthy Beverage Initiative (HBI) Vendor Strategy lies in the third priority area of the HBI which is to modify our environment by increasing access to healthier beverages. This can be done by creating a HBI membership requiring its members to increase supplies of non-sugar sweetened beverages and reduce supplies of sugar-sweetened beverages.

PROJECT OBJECTIVES AND METHODS

The HBI Vendor Strategy's main objective is to increase the supply of non sugar-sweetened beverages by developing a business case for vendors to become members of the HBI. To do this, our team collected secondary data by conducting an environmental scan and literature search of 14 articles on settings that have implemented similar initiatives. For primary data collection, we created and conducted a survey to understand 25 vendors' attitudes and knowledge of the HBI. Based on the data we collected, we made short term to long term recommendations on the adaption of HBI designation which vendors acquire by becoming members of the HBI. Our other deliverables included designing sample ecolabels to place on shelves with no sugar-sweetened beverages and creating a planogram to aid in product and ecolabel placement.

RESULTS

With a response rate of 45% for UBC Vancouver and 67% for UBC Okanagan in the HBI Vendor Survey, we found that almost 17% of vendors were interested in joining the HBI, 75% were neutral about joining, and 4% were disinterested. The most popular reason for interest was to contribute to campus wellbeing by increasing access to healthier beverages and the most popular reasons for disinterest were commitments to beverage contracts, limited knowledge on the HBI membership, and fear of declining revenue from beverage sales.

RECOMMENDATIONS AND CONCLUSION

In order to address the reasons for vendor disinterest in the HBI, we created a vendor business strategy based on data of HBI-member settings to explain that there is no decline in sales by becoming members of the HBI. Our short term recommendations include creating a steering committee who can work collaboratively with relevant stakeholders to create a public recognition system and an education and communications plan to promote the membership. Our long term recommendations include modifying corporate vendor contracts, phasing out advertisements and endorsements of non-HBI members, and monitoring compliance of members. We found limited research on the data of post-secondary institutions (such as UC Berkeley, UC Davis, Portland State University, and Columbia University) which have implemented similar initiatives. Therefore, we recommend examining initiative successes and failures of these universities which can act as templates for UBC to follow for its own effective HBI membership.

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LIST OF ABBREVIATIONS

AMS	Alma Mater Society
BC	British Columbia
CBAR	Community Based Action Research
CSR	Corporate Social Responsibility
HBI	Healthy Beverage Initiative
SEEDS	Social Ecological Economic Development Studies
SSB	Sugar-Sweetened Beverage
UBC	University of British Columbia
UCSF	University of California San Francisco

GLOSSARY OF TERMS

CORPORATE SOCIAL RESPONSIBILITY: A management model where organizations address social and environmental factors, on top of maximizing profits, as a part of their business policy and procedures to uphold a positive influence in their community (Unido,n.d.)

ECOLABEL: A label for food and beverage products to certify that they meet certain environmental standards. They provide information to consumers to enable them to make informed decisions that promote individual and collective wellbeing (Hille et al., 2018).

NUDGE EFFECT: The act of subtly leading people into making the 'right' decisions or selecting better options (e.g. choosing healthy beverages over SSBs) (Burt, 2019).

SUGAR-SWEETENED BEVERAGES: Pre-packaged beverages that include any form of sugar added during the manufacturing process. These beverages include, but are not limited to, soft drinks, energy drinks, sweetened iced coffee/tea, sweetened water, and fruit drinks with less than 100% fruit juice. Beverages are generally classified into three categories based on factors such as the density of calories and the volume of the container using a colour-coded system of classification (see Figure 1).

GREEN BEVERAGES: Pre-packaged beverages that are considered the healthiest. These beverages include, but are not limited to water, unsweetened tea/coffee and plain milk (see Figure 1).

YELLOW BEVERAGES: Pre-packaged beverages that are considered unhealthy in large quantities. These beverages include, but are not limited to zero-calorie soda, diet iced tea and 100% fruit juice (see Figure 1).

RED BEVERAGES: Pre-packaged beverages that are considered unhealthy and if consumed too often, or in large quantities, they can lead to weight gain and chronic diseases. These beverages include, but are not limited to soft drinks, energy drinks and sweetened iced tea/coffee (see Figure 1).

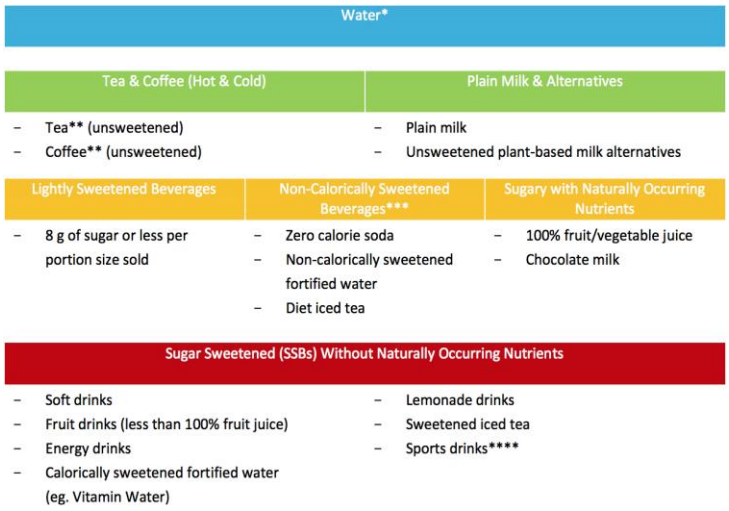


Figure 1. *A colour-coded system of beverage classification*

1. INTRODUCTION

1.1 RESEARCH TOPIC

Sugar-sweetened beverages (SSBs) are the single-largest source of added sugar in the diets of Canadian youth and young adults in British Columbia (BC) (Czoli et al., 2019). The average Canadian aged 14 to 50 years consumes 341 milliliters of sugary drinks per day which is approximately six times greater than the recommended daily serving of 50 milliliters (Czoli et al., 2019). Their high consumption, especially among young people, can be attributed to the affordability and aggressive youth-targeted marketing of SSBs (Roh and Schuldt, 2014; Ferretti and Mariani, 2019). Even though SSBs are calorie-dense, they offer little to no nutritional value and contribute to obesity, type 2 diabetes, cardiovascular disease and a range of cancers (Malik et al, 2006).

Over 60% of the beverages sold on the UBC campuses are 'red', unhealthy, and high in sugar beverages (Nuri & Sanhedrai, 2017). The widespread availability and consumption of SSBs on the University of British Columbia (UBC) Vancouver and Okanagan campuses has prompted the university to put measures in place in order to promote the consumption of water and healthier beverages as well as to gradually phase out the sale of SSBs. One of these measures taken by UBC is the Healthy Beverage Initiative (HBI).

In collaboration with UBC Social Ecological Economic Development Studies (SEEDS) Sustainability Program, UBC Student Housing, and Community Services and UBC Wellbeing, this project aims to increase the accessibility of 'green' (zero-calorie or non sugar-sweetened) beverages by developing a business case for vendors to incorporate the HBI designation and strengthen campus wellbeing. The project goal is, thus, to enable HBI and non-HBI affiliated stakeholders within and outside UBC Vancouver and Okanagan, to promote 'green' beverage

choices in-store and during catered events and meetings (See page 9 for research purpose, goals and objectives). Through monitoring and evaluation, we gauge the feasibility of a sponsorship phase out (e.g. AMS has a sponsorship agreement with Coca-Cola), pinpoint key elements of a successful communication and educational plan, and review the rigor of the HBI membership criteria. With the overall goal of raising awareness about the impacts of sugar consumption on health, these areas of opportunities will inform the certification and standards of the HBI designation.

1.2 RESEARCH RELEVANCE

The affordability and aggressive marketing of sugar-sweetened beverages (SSBs) has resulted in increased consumption of sugary drinks, especially among youth and young adults. Despite a dip in per capita sales volume between 2004 and 2015, the emergence of newer beverage categories such as flavoured waters and energy drinks has reanimated discussions on the consumption of SSBs to the foreground of Canadian public health discourse. Particularly, the increasing spending on targeted marketing at institutions of learning has inflated SSB availability and consumption at many campuses across the country (Malik et al, 2006).

Phasing out the sale of SSBs and promoting healthier choices as part of the HBI is a staged yet ambitious approach that advances several international, national and campus-wide policies and practices. This includes the Sustainable Development Goals 3 and 4, which seeks to ensure “Good Health and Well Being” and promote “Quality Education”, the Okanagan Charter: An International Charter for Health Promoting Colleges and Universities, the Wellbeing Strategic Framework, as well as the UBC Water Action Plan (see Appendix A). The HBI sets out three wellbeing priority areas (Nuri & Sanhedrai, 2017):

1. Encourage drinking water consumption
2. Promote healthier beverage choices with our community

3. Modify our environment to support healthier beverage consumption

By means of a report, a vendor business strategy proposal, and an infographic with a planogram, our research will add value to the initiative's final action area. By exemplifying one of the fundamental principles of Community Based Action Research (CBAR) - defining the problem and seeking solutions in partnership with both HBI and non-HBI affiliated stakeholders, the project also marks the first opportunity for 25 representative vendors within and outside UBC to inform the certification and standards of the HBI designation as well as its associated initiatives. The project's recommendations are based on stakeholder consultations as well as a literature review; both of which explore the potential roles of stakeholders in the implementation of the designation and identify potential challenges. In a perfect world, they aim to redress UBC's beverage landscape, which is greatly and disproportionately composed of 'red' beverages. Other deliverables include critical milestones, a presentation to the teaching team and clients, and ecolabel designs.

1.3 PROJECT CONTEXT

This research project is grounded in a repertoire of HBI-related archives. The UBC SEEDS Sustainability Program Library consists of numerous collections on the HBI designation. One useful report by Balanding Manneh is the 'Implementation of a Healthy Beverage Strategy at UBC.' In it, he describes: the effects of sugar-sweetened beverages, an economic and business strategy for vendors, adaptations of the initiative at other post-secondary institutions, and benefits of certifications, membership criteria, and ecolabels (Manneh, 2020).

This report is affirmed by three well-known research studies that surveyed UBC's beverage landscape. Written by students Sima Nuri and Tovi Sanhedrai, the 'How Healthy are the Beverages at UBC? Mapping the Healthy Beverage Initiative of UBC Vancouver Campus' report outlines the prioritization of reshaping the campus to be nutritionally sound (Nuri & Sanhedrai, 2017).

Furthermore, a survey of 288 UBC students was conducted to better understand consumer attitudes towards potential HBI implementation by projects such as the Vendor Strategy (Wright et al., 2018). This survey was done by students of the Food Nutrition and Health 473 course and is titled 'UBC Food Services Healthy Beverage Initiative: Student Survey.'

Our client partners have also provided the research team with a handful of resources such as the publication 'Healthy beverage initiatives in higher education: an untapped strategy for health promotion.' In this brief report, Patel et al. referred to the Sebastino et al. publication mentioned above, identifying the success of the University of California, San Francisco (UCSF) HBI initiative, which provided educational counselling interventions to reduce at-home SSB intake (Patel & Schmidt, 2021). This existing literature provides local and international context that will inform our development of proposals and recommendations for the HBI membership criteria and rollout action plan at UBC campuses. Surveys of UBC students and results from the implementation of HBI at other post-secondary education institutions will enable us to analyse student sentiments regarding the promotion of 'green' beverages and the effects of these attitudes on beverage sales. These results will allow our team to forecast sales trends at UBC in order to inform the design of a compelling business strategy for vendors.

A more recent publication, 'The University of British Columbia Healthy Beverage Initiative: Changing the beverage landscape on a large post secondary campus' by Di Sebastiano et al. contributes significantly to our vendor business strategy as it identifies priority tasks to be: renegotiating the campus beverage contracts and sponsorships in hindering SSB-targeted marketing, creating a multimedia campaign to promote tap water intake, and removing SSB from a residence hall (Di Sebastino et al., 2020). This report, among other literature, outlines areas of improvement such as catering services at campus events and at-home consumption of SSB among students.

1.4 PROJECT PURPOSE, GOALS AND OBJECTIVES

RESEARCH PURPOSE:

To increase the accessibility of zero-calorie or non-sweetened beverages by developing a business case for vendors to incorporate the HBI designation and strengthen campus wellbeing.

RESEARCH GOALS:

1. Increase consumption of 'green' beverages within our UBC Vancouver and Okanagan communities.
2. Modify shelf and store environment to support healthier beverage consumption by utilizing nudge effects.

RESEARCH OBJECTIVES:

1. Conduct an environmental scan and practice review of post-secondary institutions' and third party certificate schemes' successes in healthy beverage designations.
2. Develop design(s) of ecolabels for successful healthy beverage designations.
3. Through surveys, collect feedback from vendors on draft business case(s) to assess strengths and opportunities for HBI designation uptake.
4. Develop proposals and recommendations for multi-phase HBI vendor membership roll-out.
5. Design visuals of promising practices for successful healthy beverage designations.

2. METHODOLOGY AND METHODS

2.1 RESEARCH METHODOLOGY

CBAR prioritizes collaboration in its approach to research with the involvement and active engagement of community members to gain scientific knowledge that has been created through social methods (Israel et al., 1998). We have learned from and hope to add to the community's strengths and resources through our thorough secondary research on previously existing projects, primary research through surveys, and engagement with stakeholders through zoom meetings and email communications. Collaborative partnerships with community members have been facilitated through our cooperation with SEEDS Sustainability Program, UBC Wellbeing, and the UBC Student Housing and Community Services. Additionally, our team presented our gained knowledge to the community members that are involved in the project, which includes the project partners as well as UBC Vancouver and Okanagan vendors. This was done through accessible and clear explanations of our goals, intentions, and findings with community members. Research ethicality has been conducted in accordance with the Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans - TCPS 2 certification completed by all group members.

2.1 RESEARCH METHODS

For this study, we have conducted a literature review on other post-secondary and institutions that have adopted similar initiatives to the HBI measures. Additionally, secondary data collection was conducted on the practices used by businesses that were successful in reducing or eliminating sugar-sweetened beverages. We have identified barriers faced during HBI

implementation at other institutions as well as elements of successful initiatives. The literature and secondary data review was completed around mid-March 2021.

After this initial phase, we conducted primary data collection through surveying a sample size of 25 representative vendors using Qualtrics, a web-page survey tool. The survey asked HBI and non-HBI affiliated stakeholders to rate their familiarity with HBI and note their concerns about membership criteria and benefits. This survey allowed us to gain information on the vendors. The survey was administered from March 19th to April 9th.

2.2.1 SECONDARY DATA COLLECTION RESEARCH METHODS

Through a literature review, secondary data collection was conducted by searching databases for publications using relevant search terms. The scholarly databases searched included PubMed, Google Scholar, and Web of Science. The keywords used included, but were not limited to: sugar sweetened beverage elimination, beverage sales, health impacts, and healthy beverage initiative. Additionally, relevant grey literature was researched using combinations of the above keywords.

Publications included in the literature review were based on relevance to the keywords and search results were limited to publications made within the last two decades. Successful implementation of HBI-like initiatives was assessed by determining two key outcomes from each case study: financial and health outcomes. A total of 14 articles were included in the review. A list of the reviewed literature can be found in Appendix B.

For each text of literature, their methodology, results, and conclusions were organized within an excel spreadsheet. The spreadsheet also enabled us to categorize and compare the outcomes of each institution's beverage initiatives. For example, there were 16 studies in which SSBs were entirely banned from institutions such as hospitals, schools, and district vending machines. Of those 16 studies, 11 of them focused on the financial impacts and differences in

beverage sales, while 5 studies examined the health impacts of the beverage bans. Some of these initiatives were more successful than others. This allowed us to zero-in on the specific methodology of beverage initiatives that were most successful.

2.2.2 Primary data collection research methods

Primary data collection was conducted through a Qualtrics survey with a sample size of 25 representative vendors on both UBC Vancouver and Okanagan campuses. The survey included 16 questions for HBI and non-HBI affiliated stakeholders to rate their familiarity with HBI and note their concerns about membership criteria and benefits. The purpose of the survey was to gain an understanding on the awareness and attitudes of vendors towards the HBI.

Managers of UBC food vendors were chosen as research participants due to their role in deciding beverage inventory for their establishments. The names of vendors we sent the survey to, as well as relevant information such as whether they responded, can also be found in Appendix C. Our UBC Vancouver response rate was 45% with 10 businesses participating while our UBC Okanagan response rate was 67% with 2 businesses participating.

There are currently 54 buildings on the UBC Vancouver campus with vendors that sell unhealthy sugar sweetened beverages (Nuri & Sanhedrai, 2017). Of the 54 buildings on the Vancouver UBC campus, there are currently only 27 vendors that are affiliated with UBC Food Services and are open (“Feed Me!”, 2021). At the UBC Okanagan campus, there are currently two open vendors that are affiliated with UBC Food Services and 21 vendors that are not affiliated with UBC Food and Services (“Feed Me!”, 2021). We chose a target sample size of 25 vendors based on which businesses are continuing to operate during the pandemic and limited ourselves to on-campus partners as per the recommendation of our clients. We attempted to gain responses from all vendors that are currently open in order to create a business proposal inclusive of all operating businesses.

2.3 Methods of Administration

The survey was administered from March 19th to April 9th. The survey included 16 questions and took approximately 8 minutes to fill out on Qualtrics, a web-page survey tool that automatically saved all vendor responses. The decision to use surveys for our primary data collection was based on the intention to gain general feedback from currently open vendors on their knowledge of and attitudes towards the HBI. Even though that the ideal duration of time to accept survey responses is two weeks, our team and the client partners made a collective decision to extend the deadline of submitting responses by a week (resulting in the survey accepting responses for 3 weeks) in order to receive higher response rates from both UBC Vancouver and Okanagan campuses.

The survey was relayed to 22 UBC Vancouver vendors and 3 UBC Okanagan vendors through our client partners. We asked our client partners to distribute the surveys because receiving emails from UBC Wellbeing staff would likely prompt large responses. We found low response rates after the first two weeks of publishing the survey. Thus, in addition to extending the response deadline, we received permission from the teaching team and the client partners to conduct the survey over the phone if vendors consented. If we were able to speak to a manager or a staff member responsible for beverage supplies, we conducted the survey over the phone. If we were unable to speak to a manager or staff with authority over beverages, we briefly explained our research and its significance to whoever answered our call and requested them to remind their manager to complete the survey they were emailed from our clients.

3. RESULTS

The successful implementation of the HBI designation depends on the contributions of various stakeholders whose inputs are important to consider throughout the processes. Taking that into account, a total of 12 HBI and non-HBI affiliated stakeholders on both UBC Vancouver and Okanagan campuses were engaged to gather necessary input on resource availability, potential roles of individual stakeholders, and anticipated challenges of implementing the designation. The survey consists of 16 questions addressing key points such as response rate, interests and disinterests in joining HBI and the importance of prioritizing student health on campus, which are presented below.

3.1 RESPONSE RATES

45% of vendors on the UBC Vancouver campus responded to our survey and 55% did not (see Figure 1). In other words, out of 25 vendors, 10 of them responded. The UBC Okanagan campus had a 67% response rate as 33% of vendors did not respond. (see Figure 2) This means that 2 UBC Okanagan vendors responded to the survey. It is important to point out that responses from UBC Food Services managers are representative of a collection of vendors (residence dining room, franchises, cafe and markets). We did not receive responses directly from all vendors under UBC Food Services; only from managers (see Appendix C for survey respondent demographics).

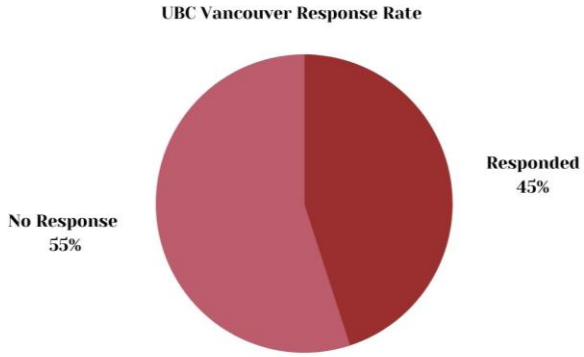


Figure 2. *UBC Vancouver Response Rate*

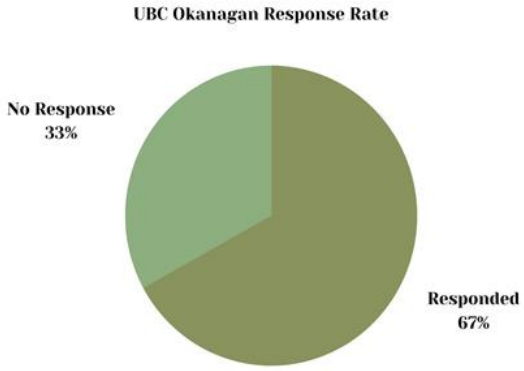


Figure 3. *UBC Okanagan Response Rate*

3.2 Reasons for Interest and Disinterest

We asked respondents to choose reasons for interest in the HBI and 50% of respondents expressed that they want to contribute to campus wellbeing by increasing supply of healthier beverage choices. 30% of respondents expressed they want to contribute to community building, and the remaining 20% expressed that they want to contribute to improving sugar literacy. It is important to note there were no vendors that selected an increase in sales profit as a reason for their interest in joining the HBI (see Figure 3).

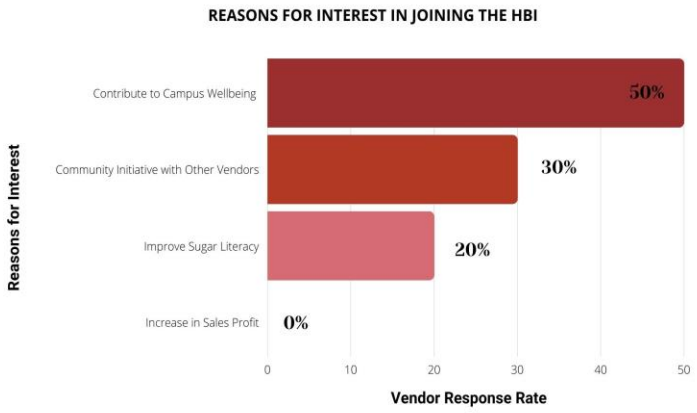


Figure 4. *Reasons for Interest in Joining the HBI*

On the other hand, there was an even 30% distribution between decline in sales profits, commitment to beverage contracts and limited knowledge on HBI designation as reasons for disinterest in the initiative. 10% of respondents also selected a lack of time and resources to implement the HBI as a reason for their disinterest.

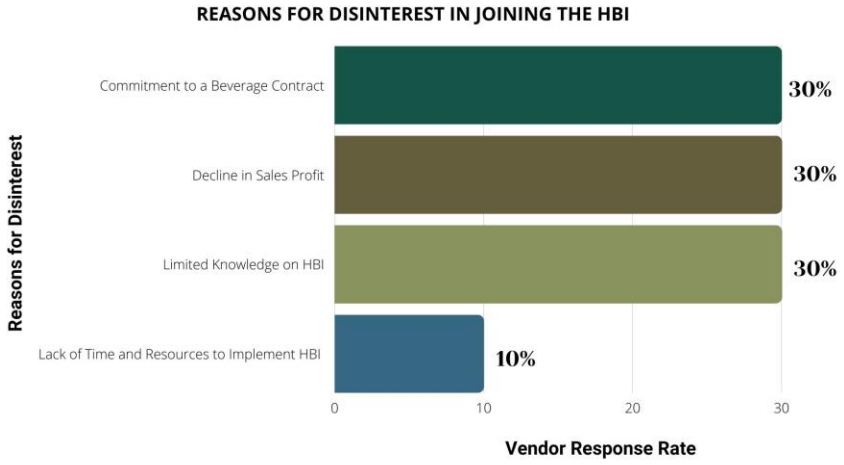
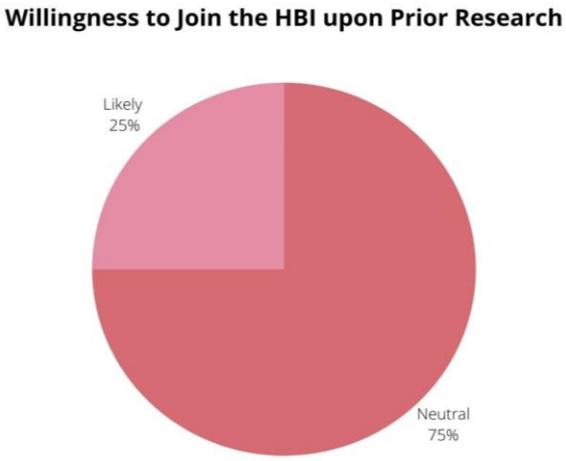


Figure 5. *Reasons for Disinterest in Joining the HBI*

3.3 WILLINGNESS TO JOIN THE HBI UPON PRIOR RESEARCH



"There is evidence to suggest that consumers are increasingly opting for healthier beverages and sales are not significantly affected. Given this new information, how likely are you to become a member of the HBI?"

Figure 6. *Willingness to join the HBI*

This question was asked to determine vendors' willingness to become members of the HBI when given information that consumers are selecting healthier beverage options and sales are not impacted by the designation. Figure 5 shows that only 25% of vendors were likely to become a member of the HBI whereas 75% were neutral after being presented with this information.

3.4 Freedom of Choice

In our last survey question, we asked vendors to comment on their personal opinion for the implementation of the HBI. To create a visual display of responses, we used a word map generator to organize responses based on popularity (See Appendix D for the word map). The top three words mentioned were "choices", "beverage", and "healthy". The word "choices" was most frequently used as vendors believed that the freedom of choice for consumers in selecting beverages, both sugar sweetened and unsweetened, is of high importance.

4. DISCUSSION

4.1 Community Attitudes and Perceptions

The HBI was developed to reduce the consumption of SSB on campus. Its elements are not unique but the formal evaluation of HBI initiatives are not publicly available. An initiative that most closely resembles the UBC HBI is University of Sydney's multipronged HBI approach to the HBI, which intends to (1) phase out the sale of sugary drinks from all campus retail outlets and vending machines, (2) regulate the marketing of sugary drinks on campus including events run by student clubs and societies and (3) promote healthier beverage options through availability,

pricing, and product placement programs, and provide more water fountains on campus (Strom, 2016). Although there is little publicly available information on the evaluation of the University of Sydney intervention, we know that a ban of SSB sales is associated with a reduction in SSB intake, which offers a promising strategy for reducing its harmful health effects (Epel et al., 2019). Additionally, the implementation of the HBI at select locations such as residence dining halls has met with little resistance from the UBC community (Di Sebastiano et al., 2021). In fact, almost 90% of the UBC community wants increased availability and marketing of healthy beverages (Manneh, 2020). However, only 25% of vendors who filled out the survey said they would be interested in lessening their SSB quantities, even when prompted with the information that the UBC community had expressed interest in the removal of SSBs.

4.2 Vendor Attitudes and Perceptions

It is important to discuss why vendors may be interested in the adoption of the HBI. This is because understanding the reasons for participation will allow the team to set indicators for meeting any expected goals. In our survey, we addressed the question of why vendors would be interested in joining the HBI and our most selected answer was the contribution to campus wellbeing. This demonstrates that vendors highly value the health of students and staff on campus. Pulker et al. (2018) share the same findings which show that vendors value their commitment to corporate social responsibility (CSR). Vendors' devotion to CSR incentivizes many businesses to take part in certification programs and voluntary standards. Thus, participating in the HBI as a way to contribute to campus wellbeing can be seen as a CSR initiative for vendors and serves as a motivator for future implementation of the HBI designation.

The responses to the last question of the 2021 HBI Vendor Survey, which addressed vendor's personal comments to the HBI designation uptake, were interesting. Many consulted stakeholders expressed interest in the consumers having choice in their unsweetened and

sweetened beverage selection. Some also promoted the idea of having educational campaigns on campus to improve sugar literacy. They felt that some of the responsibility should fall on consumers to be informed about the content of the beverages they purchase. This suggestion does not align with our research goals; one of which is to alter shelf and store environments in order to support healthier beverage consumption through nudging. However, we argue that through the nudging effect, consumers will still have the decision-making power to select their beverages (Manneh, 2020) (see Appendix F for Planogram).

4.3 SALES IMPACT

There have been several studies conducted that disprove that SSB bans will decrease their sales. For example, the Nationwide Children's Hospital in Columbus, Ohio put into action a ban on SSBs in 2011 that shifted the pattern of beverage sales with no revenue loss (Eneli et al., 2014). Similarly, in 2011, the city of Philadelphia implemented a ban on SSBs in over 300 of their vending machines which resulted in a 33% increase in beverage sales and an overall net zero change in total beverage sales (Pharis et al., 2018). When first asked about the stakeholder's interest in joining HBI, 20% responded 'No', 60% were 'Neutral, and 20% responded 'Yes'. However, when shown and reassured that there is evidence that the HBI will not decrease sales, 80% of consulted stakeholders remained 'Neutral' about joining the initiative, and 10% responded that they were interested. This is surprising since many HBI-related literature has anticipated that stakeholders would be mainly concerned with the potential decline in profits. Nevertheless, most stakeholders were either unconvinced by the research at hand or had other reasons for remaining neutral about joining HBI. The vendor business case will address the sales impact of SSB reduction to further demonstrate that stakeholders should not face a loss of profit if they join the HBI (see Appendix E for Vendor Business Case).

4.4 Future Considerations

A significant reason for hesitation in joining the HBI is limited knowledge on the designation. 30% of the consulted stakeholders marked this as a concern. As suggested by many vendors, educational campaigns on SSBs could be helpful in recruiting more stakeholders to join the HBI. In their study on "Healthy Beverage Initiatives in Higher Education", Patel and Schmidt found that SSB reduction campaigns that involved influential peers as educators have been successful in reducing SSB intake in school settings (2021). An HBI educational campaign involving UBC athletes could be a successful strategy to convince students to limit the amount of SSB in their diets and for stakeholders to offer more 'green' beverages. Although vendors that responded to the survey claimed they prioritized community wellbeing, they did not view sugar content as being a significant factor in beverage inventory selection. This is why a focus on an educational campaign that addresses the harms of SSB would be beneficial for curbing SSB intake in the UBC community.

An additional reason that contributed to 30% of stakeholder in remaining neutral about joining HBI is their ongoing beverage contract commitment. Future HBI projects should examine issues of external sponsors. Beverage companies often have sponsorship agreements with campus outlets to distribute their beverage products. For example, AMS has a sponsorship agreement with Coca-Cola. This is not exclusive to UBC Food Services. Non-HBI affiliated members such as the restaurants on University boulevard have also expressed being tied to beverage contracts. Notably, most of the surveyed stakeholders stated that their contracts will expire in the next two years, so this can be a window of opportunity to shift the way stakeholders choose their beverage inventory.

4.5 LIMITATIONS

The survey is met with data limitations, which are threefold. The first limitation is a relatively low total response rate of 48% from both UBC Vancouver and Okanagan campuses. Although we have also contacted stakeholders through the phone, response rate remained low because of the effects of the pandemic. In fact, many business managers, who are our survey targets, have voiced that since they now work more frequently in their outlets, they have less time to respond to the email surveys. Our second limitation is that conducting phone interviews may lead stakeholders to answering questions differently because they are being observed. This impacts the validity of our survey results. Finally, our survey encountered sample size limitations. This is because many businesses have closed their outlets, either because of the effects of pandemic or the temporary dine-in ban imposed on March 30th across BC. Another reason for sample size limitations includes the inability to conduct surveys in person. In line with Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans - TCPS 2, the team utilized emails and telecommunications for survey administration, which may affect the reliability of our results.

5. RECOMMENDATIONS

5.1 RECOMMENDATIONS FOR ACTION AND IMPLEMENTATION

These actionable recommendations are informed by a literature review and consultation of key HBI stakeholders. These recommendations are meant to guide the implementation of an HBI designation program to increase the consumption of 'green' beverages at UBC. The recommendations are classified into short term and medium-to-long term proposals. Short-term recommendations are expected to be implemented in the next one to three years, while medium-to-long term recommendations are likely to take more than three years.

5.1.1 Short Term Recommendations

Recommendation 1: Create a designated HBI steering committee to manage the objectives of the initiative and evaluate the feasibility and scope of our recommendations

The UBC Food and Nutrition Committee and the UBC Okanagan Food Strategy Committee are a diverse group of faculty, staff and students with interest and expertise in food systems and food security. The committees meet quarterly to discuss, monitor and evaluate initiatives and interventions around 5 priority areas for wellbeing, which includes the HBI (Kozicky, 2018). In these meetings, there is a need for a dedicated HBI committee. Thus, we recommend the formation of a steering committee in spearheading HBI-related agendas during discussions and meetings and leading the implementation of the initiative. Our client partners suggested that this committee work collaboratively with the Food and Nutrition Action Committee and the UBC Okanagan Food Strategy Committee. In addition to being composed of UBC Wellbeing and Food Services staff, the committee should aim to involve stakeholders including students, vendors, and consumers. This can be done by either inviting vendors to join quarterly meetings or designating a spokesperson for each stakeholder. The HBI-dedicated committee will be directly involved in the development and implementation of each recommendation suggested below.

In early planning stages, the primary objective of the committee will be to determine a feasible membership criterion for outlets and events. This criteria should clarify what percentage of total beverage supplies should be green, yellow, and red in order to become a member of the HBI. Incentives and rewards derived from becoming a HBI member include endorsements, sponsorship, and advertisements at campus events. These will be explained in detail under long term recommendations below.

Recommendation 2: Create a public recognition system to promote certified members and attract prospective members

The food and beverage outlets that serve the UBC community are relatively congregated within and around the UBC campuses. Thus, with marketing and promotion, the word of the designation program can be spread easily. We recommend the HBI steering committee to seek the guidance of UBC Events and Outreach as well as AMS Events and Programming in creating a public recognition system to promote certified members and attract prospective members including off-campus partners. This public recognition system should be designed and implemented similar to arrangements as the Fair Trade Coffee recognition system. Table 1 outlines how the HBI can satisfy the five core elements of a successful certification program (standard-setting, adoption, implementation, enforcement and monitoring) for its members with emphasis on the first three rows.

Elements	Summary
Standard-setting	HBI standards are set by the HBI steering committee. The standard structure should consist of several principles; each of which is composed of various criteria and indicators that vendors have to meet for certification. A principle-based structure substantiates the HBI standards; otherwise, they may be viewed as arbitrarily determined (Ochieng et al, 2013).
Adoption	HBI can increase adoption by providing incentives to members. For example, only HBI members can plan, sponsor and run campus events.
Implementation	HBI criteria must be met before certification. The HBI committee should

	employ volunteers to work with partner members to ensure a smooth implementation and monitoring of the vendor's performance based on the set criteria.
Enforcement	The HBI committee carries out investigation audits in response to a complaint, reported incident or substanding information regarding the performance of a certified vendor relating to one or more criteria. Even though investigation audits require extensive record-keeping, they ensure that not only are criteria being met but also individual vendors have access to information that enable them to make informed business decisions to decrease their supply of 'red' beverages (Ochieng et al, 2013).
Monitoring	An assessment is carried out when a vendor applies for HBI certification for the first time and then annually afterward.

Table 1. *Elements of the HBI certification*

Even though the creation of HBI membership criteria is at the discretion of the steering committee, the current sample of the criteria for food and beverage outlets and events lack clear benefits for prospective members. As we saw, no consulted stakeholders selected 'Increase in Sales Profit' as an option for interest in the HBI. Furthermore, an application procedure for vendors should be made as seamless as possible. As exemplified by the Rainforest Alliance, Canada, an application procedure could look like:

1. Prepare for the HBI's certification audit
2. Contact the HBI steering committee (the authorized certification body)
3. Host the auditing team
4. Become certified and sell HBI-certified beverages

Members of the initiative should be rewarded with documented certification placed conspicuously for customers to see. For example, an ubiquitous ecolabel should be crafted by UBC Food Services (UBCFS) marketing and communications specialists for UBC HBI members to place on shelves and used during campus events where 'green' beverages are sold. These HBI signifiers reward HBI designate outlets with public recognition and promotion and outlets that are yet to be certified are also encouraged to join the program. Other signifiers could also include listing outlets on the HBI website or nominating a HBI outlet of the month on social media platforms. These signifiers will function in conjunction with our fourth short term recommendation; the development of an effective communication and educational plan to promote the HBI designation and inform students about healthier beverages.

Recommendation 3: Design ecolabels on shelves with green beverages in HBI vendor members' businesses

With a multitude of benefits, an ecolabel is not only an effective way of informing consumers about the health impacts of the product they are buying or using, but also enabling HBI vendor members to differentiate themselves from competitors (International Institute for Sustainable Development, 2018). We recommend that the ecolabel designs be completed by the UBCFS marketing and communications team and assisted by future student projects or even department-wide competitions such as in marketing, digital technology, and communications.

There are some considerations when designing the ecolabels: (1) terminology that is easily understood by the general population and (2) consistent color and fonts so the initiative is easily recognizable. Numerous psychological studies indicate the varying feelings and perceptions associated with colors used to stimulate senses in the marketing of products and services (Labrecque, 2020). We recommend using either blue, the thematic color of UBC Wellbeing, or green which is usually associated with environment, health, and goodwill (Krey and Rossi, 2017). Green is also consistent with the green, yellow, and red color-coded scheme used to categorize SSBs (see Glossary of Terms). This color-coded scheme also provides a pre-established criteria for vendors to determine which beverages are green and should therefore be placed on shelves with ecolabels. This color scheme is currently being designed by a UBC Wellbeing WorkLearn student and should be updated once it is completed.

Figure 7. *Ecolabel Designs*

For the enforcement and monitoring of ecolabel placement, recommendation 3 from our long term recommendations below should be followed. Using Canva, we have created some sample designs that the UBC Food Services communications team can consider (see Figure 6). We used positive framing in our samples by including “healthy” beverages, which results in more positive attitudes and a sense of gaining health rather than using negative framing such as “no sugar” or “low sugar” which indicates a loss of sugar. Keeping positive framing and the considerations we briefly stated above in mind, ecolabels can act as effective cognitive supports for consumers (Garg et al., 2021).

The ecolabel will be placed beneath green beverages on shelves as consumers better utilize information on shelves beneath products at eye level than on nutritional fact panels on products (Villas-Boas et al., 2020; Krey et al., 2017). To aid vendors in the placement of beverages and eco-labels on shelves, one of the deliverables of this project is an infographic with a planogram (see Appendix E).

Recommendation 4: Engage relevant UBC departments in the creation of an effective communication and educational plan that will help promote the HBI designation program and HBI designated outlets among the wider UBC community

The more effectively the objectives and the existence of the initiative is communicated to the food and beverage outlets and the public, the more impactful the initiative is likely to be. Thus, an effective communication and education plan should be created by consulting experts from relevant UBC departments such as the Faculty of Land and Food Systems, UBC Communications, Student Housing and UBC Wellbeing. Specifically, the education plan serves to improve sugar literacy among students and enables them to recognize and understand the significance of the HBI and UBC's commitment to the Okanagan Charter. For example, the plan can include an infographic placed by the entrance of vendor locations or placed with the ecolabel on shelves to educate consumers on the designation and how to identify shelves containing the HBI certified ("green") beverages.

5.1.2 Medium-to-long term Recommendations

Recommendation 1: Modify corporate vendor contracts by including the HBI membership requirements in property lease contracts

Pre-existing beverage contracts were cited by 30% of our consulted vendor respondents as the primary reason for disinterest in HBI membership. Therefore, our first long term

recommendation is to incentivize and/or require vendors to replace corporate vendor contracts from companies like Coca Cola with HBI compliant supplier contracts. To accomplish this, we recommend that healthy beverage requirements be written into the property lease contracts for food and beverage outlets. This contractual requirement serves as a powerful tool to encourage non-UBC owned or affiliated outlets to become members of the HBI as they are less likely to be as easily persuaded as UBC owned or affiliated vendors in supporting the university's commitment to the Okanagan Charter and its community to increase consumption of less sugar-sweetened beverages (Manneh, 2020).

Recommendation 2: Phasing-out corporate advertisements, sponsorships, and endorsements of non-HBI members

In addition to modifying contracts, we recommend the phasing out or corporate advertisements, sponsorships, and endorsements from vendors who are not members of the HBI. This membership can be a requirement of obtaining sponsorships and advertisements so that only HBI compliant businesses are able to advertise their products at campus events. Advertisements, endorsements, and sponsorships can be effective incentives in nudging prospective food and beverage vendors on both campuses to become members of the HBI. Therefore, there will be public recognition for the promotion of current members and attraction of prospective members which can supplement the educational plan that will inform consumers of the benefits of the HBI alongside retailers.

Recommendation 3: Development of a HBI team which assesses compliance and enforces appropriate measures for rewarding and warning vendors

In order to maintain compliance, we recommend annual assessments of sales and in-person visits by designated members of the HBI steering committee throughout the winter and

summer sessions. While those meeting the HBI membership requirements are rewarded with advertisements, sponsorships, and endorsements at campus events, those not meeting requirements can be subject to warnings or removal from the initiative. These assessments should also create space for vendors to provide feedback and address any questions or concerns they may have regarding the impact of the HBI on their business operations. In our vendor survey, we found that some vendors who had previously participated in the HBI were dissatisfied with the initiative and felt that consumers should have a choice of which beverages, sugar sweetened or not sugar-sweetened, they can consume. Therefore, this recommendation should follow short-term recommendation 2 which educates vendors and consumers of UBC's commitment to a healthy campus and the role of the HBI in supporting it without limiting consumer choice.

5.2 Recommendations for Future Research

HBIs are beginning to gain traction at post-secondary institutions, however, there is still very limited data coming from these colleges and universities. Due to the lack of data from campus-based institutions, much of the secondary research conducted for this project was derived from non-academic settings including community centers and hospitals. While these other institutions still provide valuable insights towards understanding the financial and health outcomes of adopting local healthy beverage guidelines, the post-secondary campus setting was underrepresented in our literature review. The University of California San Francisco stands out as an exceptional example because their HBI initiative was thoroughly monitored and documented in terms of both health as well as financial outcomes. Future HBI research should examine secondary institutions--including UBC--as data becomes more available. Institutions such as UC Berkeley, UC Davis, Portland State University, and Columbia University have all adopted healthy food and beverage initiatives. While we were unable to find concrete data related to health and financial outcomes from these initiatives, these universities should be revisited in

future research as data may soon become available. Additionally, future research efforts should examine vendor adoption successes and failures from these universities. Campus vendor adoption of HBIs is a valuable area for future research as there is a commonality between the concerns and desires of campus vendors at most universities. Future research aimed at exploring the perceived barriers and successful incentives used for vendors at other institutions will provide valuable templates for the UBC vendor HBI adoption strategy.

6. CONCLUSION

Due to the effects of the pandemic, managers, our target respondents, faced more in-store responsibilities and hence, they had less time to respond to the email surveys. By altering our methods of administration, our team adapted to these challenges and continued to meet the project's critical milestones (see Appendix G and H). Our results suggest that while 17% of consulted vendors expressed an interest in becoming members of the HBI, 4% expressed disinterest, and 75% remained neutral. The primary reason for interest was the desire to contribute to campus wellbeing and the primary reasons for disinterest were pre-existing vendor contracts, lack of knowledge on the HBI, and fear of declining sales after membership. Despite vendors claiming that they prioritized community wellbeing, many of them did not consider sugar content to be an important factor in beverage selection for their inventory. To address these reasons for disinterest, we recommend creating a dedicated HBI steering committee. The committee should strive to collaborate cross-departmentally to present our vendor business strategy, create an effective educational and communications plan to increase awareness of sugar literacy and recognition of the HBI, and ensure membership compliance and community interest.

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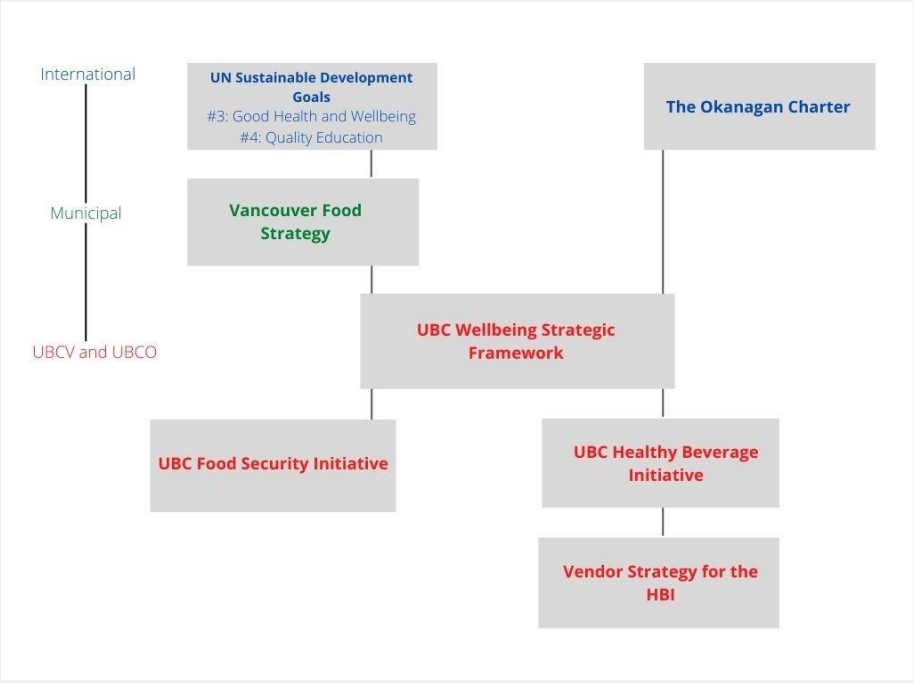
8. APPENDICES

Appendix A: The HBI Policy Framework Connections

Municipally, the City of Vancouver has adapted the Vancouver Food Strategy, which meets the UN's Sustainable Development Goals. It is supported by our project as our project also aims to utilize the food system to attain optimal health. The UBC Wellbeing Framework incorporates goals of the municipal and international strategies, follows guidelines of the Okanagan Charter, and includes numerous initiatives including the Food Security Initiative and UBC Healthy Beverage Initiative. Our project, Vendor Strategy, is a part of the UBC HBI and was designed to propel forward the UBC Wellbeing Strategic Framework (Goran et al, 2015).



Appendix B: Literature Review on Excel spreadsheet

A literature review of 14 articles on the successful implementation of HBI-like initiatives was conducted and its summary can be found below.

Article Citation	Aim/Outcome Measure	Key Findings	Relevance to HBI
Pharis, M. L., Colby, L., Wagner, A., & Mallya, G. (2018). Sales of healthy snacks and beverages following the implementation of healthy vending standards in city of Philadelphia vending machines. Public Health Nutrition, 21(2), 339-345. https://doi.org/10.1017/S1368980017001914	A study protocol in the USA to examine outcomes following the implementation of employer-wide vending standards designed to increase healthy snack and beverage options. Measured the proportion of healthy versus less healthy sales and sales volume and revenue for snack and beverage vending machines.	Sales of healthy vending items were significantly higher following the implementation of employer-wide vending standards for snack and beverage vending machines. Entities receiving revenue-based commission payments from vending machines should employ strategies to minimize potential revenue losses.	Healthy beverage sales were 33 % higher (68·2 to 90·6 items sold per machine per month) and there was no significant change in total beverage sales.
Eneli, I. U., Oza-Frank, R., Grover, K., Miller, R., & Kelleher, K. (2014). Instituting a sugar-sweetened beverage ban: Experience from a children's hospital. American Journal of Public Health (1971), 104(10), 1822-1825. https://doi.org/10.2105/AJPH.2014.302002	A study protocol in the USA to improve the nutritional offerings for patients and employees within our institution, Nationwide Children's Hospital (NCH) in Columbus, Ohio, implemented an SSB ban in 2011 in all food establishments within the hospital.	An institutional policy banning SSBs at NCH altered beverage sales in 12 months without revenue loss at non-vending food locations. Beverage sales patterns shifted with a decrease in carbonated beverages and an increase in milk, juice, water, and coffee sales.	SSB ban is not onerous to institute, particularly if implemented within a broader wellness initiative that includes healthier food options and a strong employee wellness program.

Patel, A., & Schmidt, L. A. (2021). Healthy beverage initiatives in higher education: An untapped strategy for health promotion. Public Health Nutrition, 24(1), 136-138. https://doi.org/10.1017/S1368980020003766	A review in the USA to think creatively about obesity prevention.	A component that could be bundled into SSB reduction efforts involves modelling of healthy beverage intake by parents/guardians, teachers, peers and other respected role models. Interventions that have incorporated influential peers as educators have successfully curbed SSB intake in a variety of settings.	College and university campuses are a critical setting for obesity prevention in young adults.
Epel, E. S., Hartman, A., Jacobs, L. M., Leung, C., Cohn, M. A., Jensen, L., Ishkanian, L., Wojcicki, J., Mason, A. E., Lustig, R. H., Stanhope, K. L., & Schmidt, L. A. (2019;2020). Association of a workplace sales ban on sugar-sweetened beverages with employee consumption of sugar-sweetened beverages and health. JAMA Internal Medicine, 180(1), 1-8. https://doi.org/10.1001/jamainternmed.2019.4434	A study protocol in the USA to determine whether a workplace sales ban on sugar-sweetened beverages (SSBs) associated with a reduction in employee intake of sugar-sweetened beverages and improvement in their cardiometabolic health?	This study's findings suggest that the workplace sales ban was associated with a reduction in SSB intake and a significant reduction in waist circumference among employees within 10 months.	This study substantiates that the workplace-wide SSB bans are effective in decreasing SSB sales. It also shows that decreasing SSB intake has positive health outcomes.
Eneli, I. U., Oza-Frank, R., Grover, K., Miller, R., & Kelleher, K. (2014). Instituting a sugar-sweetened beverage ban: Experience from a	A study protocol in the USA to evaluate the effects of an institutional policy banning on SSBs sales at non-vending food	Compared to 2010, the total annual beverage sales at the hospital-controlled food venues (cafeteria, food court,	This study substantiates that the hospital-wide SSB bans are effective in decreasing SSB

children's hospital. American Journal of Public Health (1971), 104(10), 1822-1825. https://doi.org/10.2105/AJPH.2014.302002	locations in Nationwide Children's Hospital in 12 months.	gift and snack shops) increased by 2.7% in 2011 ($798 752 vs $867 853). Sales revenue increased by 19% for all types of milk, 22% for 100% fruit juice, 13% for coffee (includes specialty drinks such as lattes and cappuccinos), and 7% for water, while decreasing by 17% for carbonated beverages.	sales. Although it is not in a campus setting, it also shows that decreasing SSBs can and should involve policy action and that SSB bans do not incur in negative financial outcomes.
Mason, A. E., Schmidt, L., Ishkanian, L., Jacobs, L. M., Leung, C., Jensen, L., Cohn, M. A., Schleicher, S., Hartman, A. R., Wojcicki, J. M., Lustig, R. H., & Epel, E. S. (2021). A brief motivational intervention differentially reduces sugar-sweetened beverage (SSB) consumption. Annals of Behavioral Medicine, https://doi.org/10.1093/abm/kaaa123	A study protocol in the USA to test, among frequent SSB consumers, whether motivations to consume SSBs moderated the effects of (a) a workplace SSB sales ban (environmental intervention) alone, and (b) a “brief motivational intervention” (BI) in addition to the sales ban, on changes in SSB consumption.	Frequent SSB consumers with stronger SSB cravings reported minimal reductions in daily SSB consumption with a sales ban only, but reported greater reductions if they also received a motivational intervention.	This is relevant to the result section of 'consumer attitudes and perceptions', which helps inform our recommendations on educational campaigns and address the freedom of choice.
Taber, D. R., Chriqui, J. F., Vuillaume, R., Kelder, S. H., & Chaloupka, F. J. (2015). The association between state bans on soda only and adolescent substitution with other sugar-sweetened beverages: A cross-sectional study. The International Journal	A study protocol in the USA to examine whether students consumed more non soda SSBs in states that banned the sale of soda in school.	Students consumed more servings of sports drinks, energy drinks, coffee/tea, and other SSBs if they resided in a state that banned soda in school but attended a school with vending machines that sold	Campus-wide ban of all or most SSB is crucial in expecting positive health outcomes in the UBC community.

of Behavioral Nutrition and Physical Activity, 12(S1), S7-S7. https://doi.org/10.1186/1479-5868-12-S1-S7		other SSBs. Similar results were observed where schools did not have vending machines but the state allowed soda to be sold in school. Intake was generally not elevated where both states and schools limited SSB availability – i.e., states banned soda and schools did not have SSB vending machines.	
Taber, D. R., Chriqui, J. F., Powell, L. M., & Chaloupka, F. J. (2012). Banning all sugar-sweetened beverages in middle schools: Reduction of in-school access and purchasing but not overall consumption. Archives of Pediatrics & Adolescent Medicine, 166(3), 256-262. https://doi.org/10.1001/archpediatrics.2011.200	A cross-sectional study in the USA to determine the relationship between various types of state beverage policies and access to and purchase of SSBs in schools, as well as overall SSB use (in and out of school).	States that only prohibit soda but authorize other drinks with added caloric sweeteners tend to be no more effective than states that take no action in reducing SSB access and purchase in schools. Policies that ban SSB's in school lead to increase in SSB purchases out of school .	The state policies looked at were intended to alter the school food environment in order to restrict students' access to SSBs. However, policies that only targeted ban on sodas resulted in an increase in purchase of sugar filled fruit juices and sports drinks, which are equally as harmful.
Basu, S., Jacobs, L. M., Epel, E., Schillinger, D., & Schmidt, L. (2020). Cost-effectiveness of A workplace ban on sugar-sweetened beverage sales: A microsimulation model: A simulation model estimates the employee health and health care spending	A review in the USA to estimate chronic disease incidence and costs of a workplace SSB sales ban.	An SSB ban would save about $300,000 per 10,000 people over ten years among similar employers,	The review illustrates the positive health and financial impact of an SSB ban.

impacts of a workplace ban on sugar-sweetened beverage sales. Health Affairs, 39(7), 1140-1148. https://doi.org/10.1377/hlthaff.2019.01483			
Miller, C. L., Dono, J., Wakefield, M. A., Pettigrew, S., Coveney, J., Roder, D., Durkin, S. J., Wittert, G., Martin, J., & Ettridge, K. A. (2019). Are Australians ready for warning labels, marketing bans and sugary drink taxes? two cross-sectional surveys measuring support for policy responses to sugar-sweetened beverages. BMJ Open, 9(6), e027962-e027962. https://doi.org/10.1136/bmjopen-2018-027962	A cross-sectional study in Australia to assess public support for 10 potential policy initiatives to reduce SSB consumption.	All 10 potential policy initiatives received majority support (60%–88%either 'somewhat' or 'strongly' in favor). Initiatives with educative elements or focused on children received high support (>70%), with highest support observed for text warning labels on drink containers (88%) and government campaigns warning of adverse health effects (87%).	The cross-sectional study foreshadows the support that HBI will garner from the UBC community.
Grummon, A. H., Oliva, A., Hampton, K. E., & Patel, A. I. (2015). Association between student purchases of beverages during the school commute and in-school consumption of sugar-sweetened beverages, San Francisco bay area, 2013. Preventing Chronic Disease, 12, E220-E220. https://doi.org/10.5888/pcd12.150306	A cross-sectional study in the USA to assess the SSB consumption habits of students from low-income, ethnically diverse communities and their commute to school.	Link to SSB consumption was most popular during lunch time. Useful to focus interventions on altering retail environments by encouraging retailers to promote healthier beverages or ban SSB and informing consumers on calorie content.	Research shows in order to reduce intake of SSB during school hours it can be beneficial to promote educational campaigns on HBI amongst retail stores.

Alsukait, R., Bleich, S., Wilde, P., Singh, G., & Folta, S. (2020). Sugary drink excise tax policy process and implementation: Case study from Saudi Arabia. Food Policy, 90, 101789. https://doi.org/10.1016/j.foodpol.2019.101789	A study protocol in Saudi Arabia to add to the global discussion on SSB tax design and policy process by highlighting the Saudi Arabia's barriers and facilitators to implementation	Our results suggest that energy drinks were perceived as more harmful than other soft drinks and thus taxed at a higher rate. We also found that the tax was perceived to be easy to administer by all stakeholders	The HBI could consider sugary tax on outlets that sell 'red' beverages
Godin, K. M., Hammond, D., Chaurasia, A., & Leatherdale, S. T. (2018). Examining changes in school vending machine beverage availability and sugar-sweetened beverage intake among Canadian adolescents participating in the COMPASS study: A longitudinal assessment of provincial school nutrition policy compliance and effectiveness. The International Journal of Behavioral Nutrition and Physical Activity, 15(1), 121-121. https://doi.org/10.1186/s12966-018-0754-5	A study protocol in Canada to examine how beverage availability in school vending machines changes over three school years across schools in distinct school nutrition policy contexts.	Participants' overall SSB intake remained relatively stable; reductions in soft drink intake were partially offset by increased sweetened coffee/tea consumption.	The study showcases that partial SSB bans will result in compensatory purchase of other sugary drinks. Thus, completely phasing out SSBs through the HBI is the way to go

Appendix C: 2021 HBI Survey Respondent Demographics

	April 2021	
	n	%
Relationship to UBC		
Managers	12	100.0
Duration of work		
0.5 to 1 year	2	16.7
1 to 2 years	2	16.7
2 to 3 years	0	0.0
> 3 years	8	66.7
Were you aware of the HBI at UBC?		
Yes	9	75.0
No	3	25.0
Have you participated in the HBI?		
Yes	6	50.0
No	6	50.0

Appendix D: Word Map for Question 16

The last question of the 2021 HBI Vendor Survey provides respondents an opportunity to outline what they think needs to be done to increase their interest or the interest of other businesses in becoming a HBI member. Through a word cloud generator, the top three words mentioned were “choices”, “beverage”, and “healthy”. The word “choices” were used in the contexts of having “healthy choices”, to give consumers “their own choices” as well as to provide consumers with “informed choices”.

Appendix E: Vendor Business Case

2021 Vendor Business Case

UBC wellbeing

What is the HBI?

The Healthy Beverage Initiative (HBI) is a collaboration between faculty, staff, student, and vendor stakeholders, to create a campus environment where it's easier to make healthier choices.

Why Join the HBI?

- Contribute to **campus wellbeing** through the UBC Wellbeing Strategic Framework
- Be a pivotal **part of the UBC Food and Nutrition Committee** and the UBC Okanagan Food Strategy Committee
- Have **priority** in advertisements, sponsorships, and endorsements at campus events

Students will still have the freedom to choose

A common theme expressed by vendors in the 2021 HBI Vendor Survey was that removing soda and other sugary drinks from campus shelves may restrict students' freedom to choose which beverages to consume. This sentiment should be considered in the context of the greater UBC community. Almost 90% of the UBC community are in favour of increased healthy beverage options. For the minority of campus consumers who feel their choices would be restricted under HBI, there are still places available for sugary beverage purchase at neighbouring outlets in the UBC Village and Westbrook Village.

UBC wants healthy beverages

90% of students and staff (~ 580) said that they want to see food and beverage vendors increase the access to and promotion of healthy beverages in a 2018 survey.

HTTPS://WELLBEING.UBC.CA/WELLBEING-CAMPAIGNS-AND-INITIATIVES/HEALTHY-BEVERAGE-INITIATIVE

No lost revenue

In a 2019 pilot study of 3 UBC residence dining halls, sugar-sweetened beverages were removed but the total revenue from healthier options purchases increased proportionally to the lost revenue from sugary beverages.

Appendix F: Planogram

The Healthy Beverage Initiative

A collaboration to support the UBC Wellbeing Strategic Framework target of reducing consumption of sugar-sweetened beverages by 50% by 2025.

Eco-label Placement

1. Place "green" beverages on shelves at eye-level
2. Place eco-labels on shelves with "green" beverages
3. Place "yellow/red" beverages below or above eye-level

Planogram

Appendix G: Critical Milestones Table

The team uses milestones as checkpoints to help us see how your project is advancing, and to show the completion of important achievements. We track our critical milestones through a table as well as a Gantt chart (found below).

Milestone Description	Start date	Completion Date
Project Proposal Submission 1	January 25	February 10
Project Proposal Submission 2	February 10	February 20
Primary Data Collection (HBI Vendor Survey) and Interpretation	March 3	April 15
Secondary Data Collection	January 25	March 3
Interim Presentation	March 15	April 7
Ecolabel Designs	April 1	April 6
Vendor Business Case	April 15	April 23
Final Presentation	April 7	April 14
Infographic with Planogram	April 15	April 20
Final Report	April 5	April 26

Appendix H: Gantt Chart

Legend:
Due Date(Red)
Task Started(Light Green)
Task In Progress(Medium Green)
Task Completed(Dark Green)

Week		W3	W4	W5	W6	W7	W8	W9	W10	W11	W12	W13	W14
Day		27Jan	3Feb	10Feb	17Feb	24Feb	3Mar	10Mar	17Mar	24Mar	31Mar	7Apr	14Apr
No.	Milestone Description												
1.0	Complete Background Work												
1.1	Review of stakeholder organization(s)												
1.2	Literature review: Issues/opportunities												
2.0	Hold Kick off Meeting with Stakeholders												
2.1	Review Project Description												
2.2	Discuss project roles, responsibilities and expectations												
2.3	Create a communication and milestone schedule collectively												
3.0	Draft/Refine Project Research Proposal												
3.1	Draft research proposal seek and incorporate feedback from client groups												
3.2	Submission of Proposal#1 (Due Feb.10)												
3.3	Refine proposal with feedback incorporated from teaching team and client groups												
3.4	Submission of Proposal#2 (Due Feb.19)												
4.0	Stakeholder Check-in #1:												
4.1	Review and seek feedback on your draft methods/process to obtain data needs												
4.2	Discuss any information or budget needs												
5.0	Develop methods of data collection (interview or focus group scripts/surveys, etc.)												
5.1	Review and seek feedback from clients												
5.2	Test tools with users groups and refine												
6 .0	Complete research (extended due to extension of vendor survey)											Apr.9	
6.1	Conduct secondary methods of data collection												
6.2	Conduct primary methods of data collection (extended till April 9th)												
7.0	Complete preliminary data/testing analysis, designs and draft recommendations												
8.0	Stakeholder Check-in #2												
8.1	Present preliminary data or concept/design and elicit feedback												
8.2	Discuss presentation style, format and desired audience												
8.3	Go over final expectation on remaining deliverables and timeline												
9.0	Draft report and other agreed-upon deliverables(executive summary, infographic, vendor strate) and circulate for feedback												
10.0	Interim Presentation (Due Apr. 7)												
11.0	Final Presentation (Due Apr. 14)												
12.0	Final Report and Critical Milestone Document Submission (Due Apr. 26)												