UBC Social Ecological Economic Development Studies (SEEDS) Sustainability Program

Student Research Report

Getting Active: Barriers and Facilitators to UBC Students Using Active Study Stations

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University of British Columbia

KIN 464

Themes: Wellbeing, Buildings, Transportation

Date: Apr 2, 2020

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Group #21

School of Kinesiology, University of British Columbia

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April 2, 2020

Executive Summary

The purpose of our study was to explore students' usage of active study stations on UBC's campus with the intent of finding effective ways to promote the use of these active study stations. We wanted to find ways that we could engage with students so that UBC can be better equipped to integrate physical activity into the lives of their busy students. Our study was guided to look at possible supporting factors and barriers that the students face when using active study stations. Through this, we were able to look at the students' use and knowledge of the pre-existing active study stations that are currently installed at Irving K. Barber Library. We obtained data from a variety of students to get a clear idea of what is preventing as well as promoting student use of the active study stations. Data was collected through a qualitative approach where we adopted a range of complementary methods of engagement through an online survey. Through student feedback from the survey, our results yielded that multiple inhibitors decreased student's usage of active study stations. One of the main inhibitors being that over half of the students surveyed were not aware that UBC had active study stations available for use on campus. Moreover, (92%) had never come into contact or used an active study station before. Of this (92%), over half of the respondents (55%) were completely unaware that UBC had active study stations readily available to them. Of the respondents that have previously used an active study station (7.9%) noted that they felt the physical and mental benefits, yet they still choose not to partake. Subsequently, the students repeatedly acknowledged the lack of promotion, time and accessibility associated with these active stations on campus. Students indicated that they felt these reasons to be the main inhibitors of their use with active study stations. Through analysis of the data, we identified that there are various features that we can improve to potentially increase the use of active study stations on campus. Although this study was relatively small-scale, we can be confident with our findings and suggestions due to the high level of consistency, as well as the notable consensus in the findings. Upon completion of the study, we combined and analyzed the data where we obtained our goal of having a clear understanding of the benefits and barriers surrounding active study stations. From this, we provided 3 detailed recommendations to our SEEDS partners. The first recommendation is increased promotion on campus through increased signs and markers. We also suggested an increase in promotion through one of UBC's social media accounts. Secondly, we recommend that the accessibility of these stations is increased to allow students access to the stations facilitating their use. Our last recommendation is that further research needs to be conducted to allow us to provide educated promotion of the stations to the students. With our data, SEEDS will be better equipped to implement these recommendations which will lead to an increase in the production, performance, and health of the students at UBC.

Literature Review

Introduction

Exercising and leading an active lifestyle often go hand in hand when an individual increases their education; therefore, institutions should be promoting decreased sedentary time, instead of confining students to the walls of their classrooms which have shown to negatively impact one's health (Wright & Winslade, 2018). Students are spending excessive amounts of time being sedentary due to their studies, which results in them exceeding the recommended 4 hours a day of inactivity (Get Canada Standing, n.d.). When an individual exceeds this recommended amount of time it may expose them to health risks such as heart disease, diabetes and early mortality (Koepp et al., 2012). Understanding how to help students decrease their time spent sitting is the first step educators need to take to better campus health.

Research has shown that increased mortality is a health risk associated with prolonged sedentary behaviors (Koepp et al., 2012). To counteract the dangers of being sedentary, alternative methods of movement need to be added to students' daily lives (Pronk, Katz, Lowry & Payfer, 2011). Through implementing active study stations, resources are being provided to help students circumvent the perceived health risks while increasing their ability to stay healthy and enhance their cognitive function (Moulin & Irwin, 2017). With tools such as active study stations, in the form of a treadmill desk or bicycle desk, individuals are provided with the resources to increase their daily movement without interfering with their routines of work and study (Moulin & Irwin, 2017). Additionally, studies are beginning to further explore the benefits of these stations on one's psychological ability, physical ability, and work performance to be

able to provide the most updated resources while acknowledging the barriers and limitations that may take place.

Psychological ability

As stated by Sng, Frith & Loprimzi, (2018), there are still missing links in what we know, and how we execute our knowledge to better treat psychological problems. It is not fully understood how physical activity impacts our cognitive function (Sng et al., 2018). This makes it difficult to implement exercise that yields positive results of one's mental state (Sng et al., 2018). To better understand the effects of physical activity on the brain Sng et al. (2018), studied how walking can play a role in learning, short term, long term, and prospective memory. When incorporating just 15 minutes of walking, Sng et al. (2018) recorded improvements in an individual's short, and long-term memory. Additionally, the study showed that moderately paced walking can have positive effects on one's memory and cognitive function (Sng et al., 2018).

A quasi-experimental design study conducted by Pinto-Escalona & Martínez-de-Quel (2019) researched the effects that acute bouts of physical activity can have on one's performance in an educational setting. This included academic performance, attention, and willingness to engage in physical tasks (Pinto-Escalona & Martínez-de-Quel, 2019). The results indicated that there was a significant difference between the control and experimental group (Pinto-Escalona & Martínez-de-Quel, 2019). The experimental group, who participated in the physical activity before the start of class, showed an increase in attention and eagerness to participate more in class than those in the control group. Through these results, we are better equipped to promote

active study stations as it was demonstrated that physical activity plays a role in a student's psychological ability.

Physical activity

Research has shown that sedentary behaviors negatively contribute to one's health by increasing their risk of certain complications such as heart disease, metabolic syndrome, cancer, premature death and difficulty with weight management (Koepp et al., 2012). A recent study by Deforche, Van Dyck, Deliens, & De Bourdeaudhuij (2015), examined the changes across 150 students' weight, level of physical activity, and sedentary behavior during the transition to higher education through a prospective study. This study's findings showed that students within their first year of university gained around 2.7 kilograms of body weight, experienced increases in their BMI's (with a greater increase for boys versus girls), and an increase in their waist circumference which is a known risk factor for cardiovascular disease (Deforche et al., 2015). Some of the contributors to sedentary behaviours involve increased internet use, time spent studying, and a decrease in sport participation which resulted in inactivity leading to weight gain in these young adults (Deforche et al.. 2015). Additional statistics showed that undergraduate students spend an average of 11.88 hours per day engaged in school-related sedentary behaviors such as attending lectures, commuting and studying (Moulin & Irwin, 2017). These results significantly correlate with our concern that students spending too much time sedentary which predisposes them to preventable health risks.

Additionally, a study conducted by Koepp et al. (2012) implemented a 1-year intervention with treadmill desks looking at the viability of the stations for weight management. They found that access to the treadmill desks decreased an individual's overall sedentary

behavior while increasing their daily activity (Koepp et al., 2012). In the 1-year intervention, results of weight loss showed moderate and positive improvements among all individuals (Koepp et al., 2012). It also found that obese individuals had greater results and increased benefits from the treadmill desks compared to those with a normal weight and BMI (Koepp et al., 2012). Similarly, another study conducted by Dinesh et al. (2011) reported a decrease in time spent being sedentary and an increase in upright behavior (standing and walking) with the use of treadmill desks. Increased walking time on the treadmills added approximately 3900 steps per day, contributing to the optimistic weight management of the individuals (Dinesh et al., 2011). The average weight loss was 2.7 kilograms, which equaled approximately a 2% decrease in body fat (Dinesh et al., 2011). As shown in these results from both studies, by increasing physical activity through these active working stations, we can see improvements in body composition, weight loss, and weight management.

Mental Wellbeing

The literature also investigates the effect of active study stations and acute exercise on work, studying and academic performance. UBC Voice (2018) conducted a study where they integrated a treadmill desk and a bike desk into the campus environment. Qualitative data obtained from undergraduate students suggested that the primary reason they used these active study stations was that they had been sitting too long and needed to refresh and recharge (UBC Voice, 2018). The results showed that out of 54 students, 11 strongly agreed, 19 agreed, 6 disagreed, while 20 were neutral on the fact that they felt more focused on schoolwork while on an active study station (UBC Voice, 2018). This indicates that more than half of students felt an increase in their mental functioning directly from using the active study stations.

Similar results were found by Pronk et al. (2011), that a sit-stand device, such as a standing desk, improved employee's moods, and overall health while increasing their sense of psychological well-being. In the "Take-a-stand Project," exercise using a sit-stand device indirectly affected the worker's mental state (Pronk et al., 2018). Due to the employee's decreased sitting time, 54 percent of the workers had less back and neck pain (Pronk et al., 2018). As the worker's physical health improved they noticed an increase of positive attitudes and therefore increased psychological capacities among themselves (Pronk et al., 2018). These changes in their state of mind were most likely due to the absence of discomfort. Through small changes such as rotating between sitting and standing, there was a multitude of increased health effects for the workers leading to increased concentration, alertness and healthier mindsets (Pronk et al., 2018). As stated by Pronk et al. (2011) sit-stand devices can decrease sedentary time in workers while positively impacting their physical and psychological health, all without vastly modifying their daily routine.

Limitations

We have been shown by the research that acute exercise benefits one's learning and memory retention, however, further research is required to enhance our understanding on the effects that active study stations have on certain populations (Pinto-Escalona & Martínez-de-Quel, 2019; Zhang, Z., Zhang, B., Cao, & Chen, 2018). The studies that have been done are very different from each other in comparison. The subject's ages and genders have varied as well as the type of memory tasks and the exercises that were performed. Due to this,

there are missing links in our knowledge about active study stations which affects our ability to promote them to the public (Sng et al., 2018).

There is currently limited research on active study stations with contradictory findings. This is due to small sample sizes used within studies; therefore, creating results that can't be generalized to other areas of the populations (Zhang et al., 2018). This is shown in results obtained from younger participants, whose results can not be directly applied to older populations (Zhang et al., 2018). Additionally, space available for active study stations is difficult to obtain and the cost of equipment is high, resulting in limited accessibility to implement these workstations (Koepp et al., 2012). When spaces do become available they can pose a problem if they are not separated from the other communal locations, because they can be distracting to others when the active study stations are in use (Koepp et al., 2012). This is a barrier as workplaces may avoid them to limit distractions for other workers (Koepp et al., 2012). However, with proper promotion and resources, workplaces could be educated on the benefits of implementing active study stations.

Conclusion

Active study stations are an important direction for future research as we expand our understanding of how exercise affects one's cognitive function (Sng et al., 2018). However, there is a lack of research in this field making it difficult to conclude statistically significant results from active study stations, which is why there is the limited promotion of these devices (Sng et al., 2018). Though, there are limited studies on the benefits we must address the findings that do highlight certain benefits. Students of all ages, as well as people working in office environments, could benefit from enhanced memory, improved retention and increased learning capabilities

(Sng et al., 2018). These benefits can all be obtained while simultaneously increasing one's daily physical activity levels by using active study stations to perform regularly sedentary tasks (Pronk et al., 2011). Through proper education, research and promotion of active study stations, there is potential for them to decrease individuals' sedentary lifestyles while providing positive psychological effects. To accurately implement active study stations, we researched the barriers students face as well as ways to provide educated promotion and increased access to the facilities.

Methods

Population

The theoretical population of this study was defined as University students within the lower mainland of Vancouver, BC. The target population we selected was students who attend the University of British Columbia. Results from past research have shown that university students are spending excessive amounts of time sedentary due to their studies (Get Canada Standing, n.d.). We had 73 students consent to participate but only 60 students completed the full study. We did not inquire about their age instead we asked what year of University they are in to get a better representation of how long students have likely been attending UBC. We also asked if students were domestic or international as it will affect their understanding of active study stations. Additionally, we asked about participants' preferred place to study to get an idea of their potential time spent studying on campus. These questions allowed us to gauge how long people have been on campus and how that could affect their knowledge of active study stations.

Procedure

Using a series of open-ended questions within a survey, we evaluated the participants' knowledge about active study stations. During March 2020, we collected data through an online survey via Qualtrics. Our study was constructed and examined by following the guidelines of a qualitative descriptive study. Our questions were developed and constructed in a qualitative manner that would allow participants to describe their thoughts and feelings, while still grouping results to gain insight into more than just individual experiences but also trends. Through this method of research, we were able to remain constant in studying social processes, direct data collection, and data analysis that tested our developed theoretical framework that explained our studies processes (Charmanz & Belgrave, 2012). The main goal of using this method of inquiry is that we would be able to understand the context, people and their interactions (Bundon, 2019). Within the analysis of our survey, we will be inductively and deductively analyzing our data to gain significant insight into the minds of those that we will be researching (Bundon, 2019).

The survey was initiated by understanding the basic demographics of our participants to better understand our target population. With this, we gained insight that would facilitate our target population to use active study stations. In section two, we gained a further understanding of our participants, inquiring about their study habits, activity habits, and physical activity levels. Through enquiring knowledge on our participant's habits, we were better able to understand how, where, and when we could promote the implementation of active study stations to get the most engagements with the stations. We continued to evaluate the level of knowledge our participants had of active study stations. Understanding the level of knowledge that our participants had

about active study stations provided us with an understanding of what type of information, and how much more education needs to be provided. In section three, a focus was placed on the participant's beliefs regarding daily movement, perceptions of exercising, and active study stations. This is where we were able to identify the barriers and facilitators to determine the reasons why students did not use the stations and how we could facilitate their use of them.

Data Collection

Our survey was conducted through a survey platform called Qualtrics which allowed participants to attain an online link to the survey. Due to this, accessibility to the survey was straightforward, effective and efficient. However, our allotted time to conduct the survey became limited as we encountered technical issues with Qualtrics as well as the outbreak of COVID-19, where we had to practice social distancing and self-isolation. These factors limited our ability to physically promote our survey on campus, leading us to resort to only online promotion. We sent our survey out to multiple Facebook pages that contained only UBC alumni, adjacent research groups, and classmates on campus. To enhance our online promotion we were able to connect with partners at UBC that allowed participants to enter in a draw upon completion of our survey. The prizes of the draw being two $25 UBC gift cards and two yoga mats with the winners being chosen on April 7th, 2020. Once we closed the survey, we were able to download a combination report of our results from Qualtrics. With this report, we began our analysis which leads to our findings.

Analysis

Our data analysis was guided by the qualitative descriptive theory using a combined inductive and deductive approach to describe the differences in data and to organize and group the raw data to further understand the results, avoiding grouping the results with individual experiences. Utilizing the inductive approach, we analyzed the data by focusing on common responses within the data set. We then identified themes, patterns, and relationships within these groups by scanning through the data to find similarities and differences within the responses. To summarize all of the data with a deductive approach, we used logical reasoning to gain general statements and premises to form a specific conclusion, we linked our research findings to our research aim and objectives.

Challenges with data collection

Throughout our research we encompassed various challenges, being able to overcome most except for the outbreak of COVID-19. Due to this, there were certain restrictions we had to abide by which included not interacting directly with individuals on campus. This was our biggest challenge as we feel our results could be different if we were allowed to engage with individuals working within or around buildings that contained active study stations, such as the Irving K. Barber Learning Center. This would have allowed us to have participants completing our survey who may have had a more diverse range of years completed at UBC, experiences, and knowledge of active study stations.

Findings

Part 1 of Survey: Participant characteristics and behaviours

First and foremost, our results stayed on focus regarding our target population. The population was UBC students and we found it important that we group these participants. This grouping is important as students tend to be less active than non-students, primarily due to sedentary behaviours related to studying (Get Canada Standing,n.d.). Secondly, most of the respondents were in years 1-3, indicating that respondents were at the beginning of their post-secondary education. Lastly, with all respondents being UBC students, this showcases that the results of the study represent a collective audience; it is not just an individual experience. Based on these facts, results shown through this section and the remainder of the paper can be generalized to the whole UBC student body.

The results showed that the majority (71.21%) of participants live off-campus and were domestic students (89.55%). Of these participants (n=67), 92.54% indicated that they were able-bodied and had no ongoing medical conditions. The remaining 2.99% indicated that they have a medical condition that affects them, while (4.48%) indicated that they did not want to disclose this information. Furthermore, the participants indicated that (44.68%) of them are active 3-4 days of a week, with (35.82%) partaking in sessions that last one hour, and (34.33%) who partake in sessions that last to one and half hours. These results are to be expected among the student body, and in most populations, as it aligns with a normal distribution or bell curve.

Part 2 of Survey: Participants' knowledge

It was indicated in our results that participants knew that there were attainable benefits from engaging in short bouts of physical activity when studying. A majority of the students said that it improves their moods, reduces stress, increases memory retention, and increases concentration. They also agreed that study breaks were important. Two leading answers emerged

from the responses as to what they do during those breaks: light exercise (stretching, walking) and going on their phone (YouTube, social media). It was shown that the study population is aware of the benefits of physical activity during study breaks, yet half of them did not engage in it.

Concerning the active study stations, the results were not as mutual. Roughly half of the study population (44.44%) knew what active study stations were, with a greater majority (46.03%) of students that did not know what they were. In regards to the participants' knowledge of active study stations on campus at UBC, a bulk (55.56%) of the respondents were unaware that UBC had active study stations readily available to them. The remaining respondents (44.44%) were aware of the active study stations on campus. Those who were aware of UBC's active study stations were also aware of where they are located. Out of all the participants, only 5 responded that they had used them. Of the 5 individuals who had used the stations, they expanded stating that they felt better and more relaxed after using the station.

Part 3 of Survey: Barriers and facilitators

When respondents were asked why they had not used active study stations, we found that their reasoning aligned with our deductive hypothesis: they did not know, were never made aware of, or they skipped using the active study stations due to the station being in use or unavailable. With an emphasis on lack of promotion, time and accessibility, students repeatedly acknowledged these as their main barriers to the use of the stations. Respondents indicated that they would be more likely to use the active study stations if they were more available, with multiple locations across campus, not just at Irving K. Barber library. It was also expressed that if there was more promotion of the stations around campus they would be more inclined to

engage. Lastly, we noted a preference for which active study station the students would be most inclined to use. From the survey, it was seen that (42.11%) voted for stationary bike desks, (35.09%) for standing desks and (22.81%) for treadmill desks.

When analyzing the student suggestions for the university on implementation of active study stations, results were again directed towards increasing the accessibility, awareness, and promotion of the stations. Regarding the promotion and awareness aspect, students suggested adding advertisements for active study stations all around campus. These advertisements were suggested to include the benefits of the stations and the exact location of the stations to encourage people to use them. With accessibility, students recommended adding several additional stations all across campus. Suggested locations being the law building, residence, more common places and in a greater number of the libraries.

Discussion

When analyzing the results, we used a deductive model as we were not present in the participants' experience doing the survey. Our goals for this paper remained the same: to get a better understanding of the benefits and barriers surrounding active study stations to increase accessibility. We referred back to the original research questions to help give us a foundation to analyze our findings. The first research question"What are the barriers and facilitators to active study stations?" was built by examining the possible negative, as well as the positive aspects of active study stations. For those that did not know about active study stations; the awareness and education of the research population had to be taken into account. Our findings stayed true to our

original question and that the locality and accessibility of the active study stations are important facets that can be barriers or facilitators depending on placement.

The second research question we used was “How do potential benefits influence student participation in physical activity?”. As shown in our research regular exercise increases one's health in many ways, including increased cardiovascular health, a decreased risk for cancer, stroke, and diabetes (Cotman & Engesser-Cesar, 2002). With various sources of media present in our lives, most people know the benefits of physical activity but still choose not to participate in physical activity or acute exercise such as active study stations (Zhang, Yang & Centola, 2015). As mentioned above, students know the benefits of physical exercise but choose not to participate in physical activity.

Regarding the responses from participants, we hypothesized that the majority of respondents would not have utilized active study stations based on our personal experiences. As researchers we had never used an active study station before due to us either not being aware of them being at UBC, or because they were always busy. This was reflected in respondents' answers as over (90%) of them had never used an active study station, this led to us investigating why.

The most significant measure of data gathered was that the majority of respondents (92%) had never used an active study station before. Of these respondents, over half of them (56%) were unaware that UBC had two bike desks available on campus. Additionally, when respondents were asked about their perceived barriers to use of the active study stations, respondents frequently stated that if there was more promotion, information available and greater

accessibility to the active study stations, they would be more likely to partake in the use of the stations on campus. Respondents felt if there was more promotion across campus containing the benefits as well as the location of active study stations there would be more of an appeal to try the stations. This strongly supports how important the promotion of these resources is to increase engagement and awareness of the active study stations on campus.

An important conclusion from the survey is that the majority of students knew that physical activity could benefit their academic performance. Furthermore, the students who knew what active study stations are and those who used them also described themselves as feeling more alert and clear-minded. As mentioned by Koepp et al. (2012) most people know that physical activity benefits them immensely. Our findings also match those presented by Pinto-Escalona & Martínez-de-Quel (2019), how acute bouts of physical activity increase performance in an educational setting. Lastly, the study by UBC Voice (2018) also agrees with our findings. Students in this study also felt an increased sense of mental well-being and increased performance (UBC Voice, 2018).

Our study established that there is a majority understanding of the benefits of physical activity and active study stations to academic performance. The issue arises here: students know that physical activity benefits them, yet they choose not to partake. Our findings answered this conundrum but not to the absolute full extent. What needs to be done is that there needs to be more awareness raised about active study stations. Secondly, active study stations need to be more accessible. What this means is that there is a need for more active study stations in various locations around campus.

Recommendations

Increased Promotion on Campus

Our first recommendation would be to increase the promotion of active study stations at UBC. Increasing awareness of the existence and location of active study stations on campus would be done through eye-catching signs placed at library entrances, and high foot traffic areas such as bathrooms, water fountains, microwaves, and doorways. These signs should include information about the location of the active study stations as well as a short blurb or funny catchphrase about the benefits of active study stations to catch readers' interest.

For social media promotion, we recommend having existing UBC social media accounts such as @ubclibrary and individual library websites promote and provide information about active study stations. This would reach students who are already engaged and subscribing to UBC centric information, programs, and events who therefore might be more likely to participate and use active study stations.

Increasing Accessibility

The second recommendation we have would be to increase the number of active study stations available, as well as placing them at different locations around campus. We recommend adding six active study stations at three new locations for the September 2020 term, resulting in a total of eight active study stations in four different locations across campus. Based on our findings, there is enough interest in active study stations at UBC that this would be a worthy investment. Increasing the number of active study stations would make them more easily

available to students. Several respondents to our survey mentioned that the current active study stations are always in use, making them inaccessible to students that would otherwise have used them. Increasing the number of locations on campus that have active study stations would make them more appealing to students in terms of convenience, proximity to where they spend time on campus, as well as accessibility. Having active study stations in different libraries such as Buchanan Library, the Law Library, the Education Library, and the Asian Library would make them more appealing and accessible to students across campus. Also, placing active study stations in the communal lounges at residential buildings would make them accessible only to students in the building, but they would be extremely accessible in terms of proximity and being available 24/7.

Further Research

Further research on how to increase engagement and accessibility of active study stations on campus will give a better idea of how to target future advertising and promotion. It would also help to narrow down the areas on campus where the active study stations would see the most use. Encompassing our recommendations, we suggest that the next research project be a longitudinal study on the use of active study stations at different locations on campus. With the implementation of the current two stations, and recommended six stations, the next study should research where most of the engagement takes place. The location of these study stations would be chosen based on data regarding library use and student foot traffic, and be implemented for a four-month term.

To track an individual's usage on the stations, there will be a sign in and sign out sheet which will track time spent active on the station. After four months of data collection at the initial location, all study stations would be moved to a different secondary location. Data collection would be repeated for four months, and then analyzed. With this data, it would be clear which locations would benefit from the expansion of active study stations, and which areas would require more promotion or an adjustment to make them more accessible. A survey similar to the one conducted with our research project could be sent out at the end of the eight-month period to get student feedback on knowledge, use, and perception of the active study stations that would further provide data on how to improve engagement and accessibility of active study stations at UBC.

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Appendix: A

KIN 464: Health Promotion and Physical Activity

Participant Consent Form for Class-based Projects

Active Study Stations

#21

Principal Investigator:

Dr. Andrea Bundon (Assistant Professor, School of Kinesiology, Faculty of Education)

The purpose of the class project:

To gather knowledge and expertise from community members on UBC's Active Study Stations. The Physical Activity Office in collaboration with Irving K Barber has newly implemented Active Study Stations in the library. Through this project, we are looking at the impact that Active Study Stations can have as a physical activity intervention for students. We hope to understand students' experiences with them, their effectiveness, how often they are used, awareness and any other relevant information that can help inform future installations of active study stations.

Study Procedures:

With your permission, we are asking you to participate in a survey. With the information gathered, students will critically examine how different individuals understand or engage in health-promoting activities or health promotion initiatives.

Project outcomes:

The information gathered will be part of a written report for the class project. The written report will be shared with campus partners involved with the project. Summaries of findings will also be posted on the following websites. ***No personal information/information that could identify participants will be included in these reports or shared with campus partners.***

UBC SEEDS Program Library:

https://sustain.ubc.ca/courses-degrees/alternative-credit-options/seeds-sustainability-program/seeds-sustainability-library

Potential benefits of class project:

There are no explicit benefits to you by taking part in this class project. However, the interview will provide you with the opportunity to voice your opinion on your experiences with health-promoting activities or initiatives in a broad sense and will provide the students with an opportunity to learn from your experiences.

Confidentiality:

Maintaining the confidentiality of the participants involved in the research is paramount, and no names of participants will be collected.

At the completion of the course, all data (i.e. notes) and signed consent forms will be kept in a locked filing cabinet in Dr. Andrea Bundon's research lab (1924 West Mall) at the University of British Columbia. All data and consent forms will be destroyed 1 year after completion of the course.

Risks:

The risks associated with participating in this research are minimal. There are no known physical, economic, or social risks associated with participation in this study. You should know that your participation is completely voluntary and you are free to **withdraw from the study** and there will not be negative impacts related to your withdrawal. If you withdraw from the study, all of the information you have shared up until that point will be destroyed.

Contact for information about the study:

If you have any questions about this class project, you can contact Andrea Bundon by phone at 604-822-9168 or by email at andrea.bundon@ubc.ca

Research ethics complaints:

If you have any concerns or complaints about your rights as a research participant and/or your experiences while participating in this study, contact the Research Participant Complaint Line in the UBC Office of Research Ethics at 604-822-8598 or e-mail RSIL@ors.ubc.ca . or call toll free 1-877-822-8598.

Consent:

Your participation in this study is entirely voluntary and you may refuse to participate or withdraw from the study at any time.

a) By proceeding with this survey I am providing consent.
b) I do not want to proceed or provide my consent

About Active Study Stations

Active study stations promote movement and proper posture while using stationary bikes, treadmills and other machines to reduce the amount of time spent being sedentary while increasing one's productivity. Active Study Stations have become an area of interest for many

establishments. These stations promote activity while facilitating learning in individuals especially students whose schedule puts them sedentary for most hours of the day. In the Irving K. Barber library at UBC, there are stationary bike desks for students to use as an alternative to regular desks.

Section 1

1. What year of study are you currently in?
    a. First
    b. Second
    c. Third
    d. Fourth
    e. Fifth
    f. Graduate
    g. Post-Graduate
    h. Other
2. Do you live on or off-campus
    a. On campus
    b. Off campus
3. Are you a domestic student or international student?
    a. Domestic
    b. International
4. Do you have any disabilities or ongoing medical conditions that have affected your everyday functioning?
    a. No
    b. I'd rather not say

c. Yes

5. How often do you participate in physical activity per week?

    a. 0 days

    b. 1-2 days

    c. 3-4 days

    d. 5-6 days

    e. 7 days

6. How long is each bout of exercise?

    a. 0 minutes

    b. 30 minutes

    c. 1 hour

    d. 1.5 hours

    e. 2 hours

    f. Other, please indicate

7. Do you know of any potential benefits that physical activity can have while studying?

    a. Yes, What do you know?

    b. No

    c. I am not convinced that physical activity brings about any potential benefits

    d. Before doing this survey, I was not aware of any potential benefits from physical activity

    e. I know that there are potential benefits but I still don't engage in physical activity.

Section 2

1. What is your preferred study environment
    a. Library
    b. Coffee shop
    c. Home
    d. With friends
    e. Other, please indicate
2. Do you take study breaks? If so, what do you do during that time?
    a. Yes, What do you do at that time?
    b. No
3. Have you heard of "Active Study Stations"?
    a. Yes
    b. Maybe
    c. No
4. Are you aware that UBC has active study stations on campus?
    a. Yes
    b. No
5. Have you used active study stations?
    a. Yes, please indicate what type and where it took place
    b. No

Section 3

1. If you have used Active Study Stations,
    a. How do you feel during and after?
    b. What has influenced your use of Active Study Stations?
2. Why didn't you know about Active Study Stations? Please select all that apply
    a. I haven't used them
    b. I wasn't informed
    c. I haven't seen them around campus
    d. There is no promotion of these Stations
    e. Didn't know they existed
    f. Other
3. If you have, or were to use Active Study Stations, which option of Study Stations would you be more likely to use?
    a. Standing desk
    b. Treadmill desk
    c. Stationary bike desk
4. What has inhibited your use of Active Study Stations?
    a. Time available to use the stations
    b. Lack of information shared to me about benefits of using them
    c. Placement/accessibility of Active Study Stations
    d. Lack of promotion around campus about the stations
    e. Other

5. If you have no prior experience with Active Study Stations, please select all that apply.
    a. I do not know anything about active study stations
    b. If I knew what active study stations were, I would be inclined to try them
    c. If I knew more about the benefits of active study stations, I would be more inclined to use them.
    d. If they were more accessible, I would be more inclined to use them.
    e. Even with knowledge about them, I would still not use them, as I prefer my current study/working habits.
6. How could Active Study Stations be more accessible and appealing to you? (select all that apply)
    a. If there was more information available I would be more interested in them.
    b. Easier access to the stations (where they are & how many there are)
    c. If I was educated on the benefits
    d. More promotion about the benefits of the stations
    e. More general promotion to facilitate my use of Active Study Stations
7. Now knowing a bit about active study stations, do you think you will use them in the future?
    a. Yes, I am likely to use them
    b. Maybe, I might use them
    c. No, I will not use them
8. What are some suggestions you would have for Universities considering implementing Active Study Stations?