UBC Social Ecological Economic Development Studies (SEEDS) Sustainability Program

Student Research Report

Move UBC Final Report and Executive Summary

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EXECUTIVE SUMMARY

The aim of this report was to evaluate the effectiveness of current marketing strategies implemented by Move UBC and on how they can be improved by looking analyzing the potential barriers people at UBC face. These strategies were designed to target the student and staff population at UBC to help them meet the recommended physical activity guidelines of 150 minutes per week of moderate-to-vigorous aerobic exercise (Canadian Society of Exercise Physiology, 2019). With this focus on physical activity, we examined whether students and staff were meeting the recommended guidelines and gained insight into the potential barriers they may have faced.

Our report introduces Move UBC and their goals of promoting physical activity around campus. The target population of the study was the non-participant population of staff/faculty and students. To qualify for this study, participants had to be current students or staff/faculty members at UBC. The student population included both undergraduate and graduate students, while the staff population included staff, faculty and teaching assistants.

An evaluation for Move UBC was achieved by surveying non-participants and finding out why they did not participate in the physical activity campaign. With this data we will be able generate recommendations on how Move UBC can create a better, more effective physical activity campaign. An online survey created by Google Forms was used to get data from our participants. Our survey consisted of 10 questions including yes/no, short answer and open-ended questions. Access to the survey was given via emails sent out by our group members to staff/faculty and students here at UBC. A consent disclaimer was included at the top of the survey to give participants the autonomy to choose whether they wanted to participate or not. By the end of our study we had 22 participants in total, 13 students and 9 staff and faculty.

The report also includes the results of our findings and a discussion on the data that we collected. It also contains recommendations for Move UBC in improving their promotional efforts. We analyzed the responses from our questions and included figures which displayed the data. Reading the responses, we were then able to identify common themes relating to the non-participant population and see where Move UBC can improve for future campaigns.

Our study found that most students and staff were aware of Move UBC's campaign (63.6 %). However, most of them did not participate in Move UBC events (36.4 %). There are still barriers that prevent some non-participants from meeting their recommended amount of physical activity. Further research can be done on a larger sample size of the UBC population that includes a greater variety of students and staff from different faculties. See conclusion for detailed discussion of results, limitations and recommendations.

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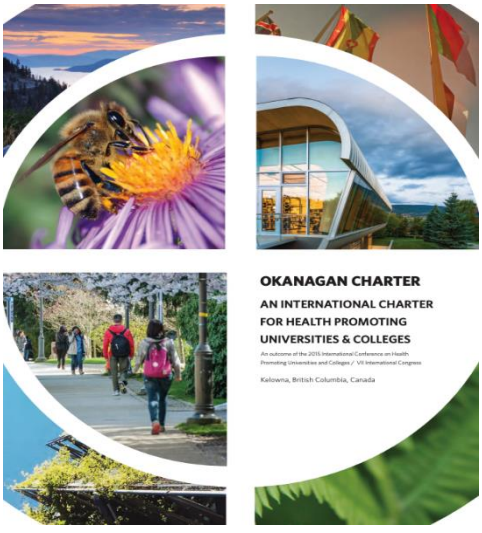
INTRODUCTION AND LITERATURE REVIEW

UBC Wellbeing is an initiative to help improve upon the campus setting of UBC as a better place to work, live, and learn through a collaborative, systems wide approach across both campuses. Wellbeing is a priority for the students and staff at UBC as the university wants to ensure they are healthy in different aspects of their life to succeed. The five well-being priorities that UBC wellbeing aims to target include built and natural environments, food and nutrition, social connection, mental health and resilience and physical activity and sedentary behaviour. (UBC Wellbeing, n.d.).

A main point of reference for UBC Wellbeing is the *Okanagan Charter: An International Charter for Health Promotion Universities and Colleges*. (The Okanagan Charter n.d.). This charter was created in June 2015 at the International Conference on Health Promoting Universities and Colleges at the University of British Columbia, Okanagan campus. Over 45 countries with representation from educational institutions to health organizations (such as the World Health Organization) participated in this conference. The Okanagan charter was created over the course of this three-day conference and gives educational institutions guidelines on principles and framework for health promotion on campus. (The Okanagan Charter n.d).

The two 'Calls to Action" of the Okanagan Charter Include:



1. To embed health into all aspects of campus culture, across the administration, operations, and academic mandates.
2. To lead health promotion action and collaboration locally and globally.

In October 2016, UBC became one of five Universities to adopt the Okanagan Charter and commit to supporting wellbeing on campus. Move UBC is an initiative with goals to increase physical activity and decrease sedentary behavior among students, staff, faculty and the University Neighbourhood Association (UBC's residential community).

Our group has been asked to evaluate the awareness and engagement of Move UBC. We will be focusing on the non-participants among staff/faculty and students. We chose this population because Move UBC's goal is to increase awareness and physical activity levels among students and staff/faculty. An evaluation of Move UBC will be achieved by surveying non-participants and finding out why they did not participate in the physical activity campaign. With this data we will be able generate recommendations to how Move UBC can create a better, more effective physical activity campaign. However, to properly determine Move UBC's success, we will also need to examine previous literature.

In "Differences in health promotion programs participation, barriers and physical activity among faculty, staff and administration at a university worksite," this study surveyed 308 employees: 122 faculty, 156 staff, and 30 administrators in California State University. The purpose of the survey was to measure employee participation in health promotion programs (HPP) offered by the university, barriers to participation, and how frequent an individual participates in physical activity. In terms of HPP participation, faculty ranked the lowest with 11.5% respondent participation, with staff ranking the highest at a rate of 37.8% respondents, followed closely behind by administrators with a 36.7% respondent participation (Leininger et al., 2015). They found that time constraints proved to be the top barrier amongst staff and administration. Amongst non-participant faculty members, the top barrier was simply that they followed their own exercise program and therefore, decided not to participate in the HPPs. Another barrier they found was time, which can be further broken down into conflicts with their schedules and living too far away from the university, resulting in a long commute. With regards to whether employees met the minimum weekly recommendation in physical activity of 500 MET minutes per week (min/wk) set by the HPP, they also found that administration ranked highest with 83.3%, followed by faculty with 73.8% and lastly staff, who despite having the highest HPP participation rates, only had 49.9%, just meeting the minimum requirements (Leininger et al., 2015). These results indicate that there are a multitude of distinct barriers that affect university employees with regards to HPP participation. Different strategies should be considered and implemented to overcome these barriers.

At the University of McGill, the physical activity committee looked to increase first-year undergraduate student participation in physical activity and club participation by making it required to attend Activities Night, which is hosted by the Students' Society of McGill University (SSMU). Activities Night is a showcase of hundreds of clubs, services and groups. By making the event mandatory, McGill University can ensure every incoming undergraduate student understands that this is a place where they will be studying, but also where they can live a healthy life and be a part of a community, whether if it's through intramurals, recreation, or different clubs. Move UBC could take this a step further by hosting a similar clubs' night but making it mandatory for students to sign up for at least one club and have the option of leaving the club if they wish after the first week.

Similarly, at the University of California, Riverside implemented an initiative to ensure college students were physically active. Riverside's healthy campus initiative emphasizes creating a culture that will enhance the pre-existing environment, office, and classrooms (Healthy Campus Initiative, 2018). UC Riverside also intends to improve access to traditional and non-traditional recreational services (Healthy Campus Initiative, 2018). Riverside has created an initiative as it looks to incorporate physical activity spaces into existing spaces that students already are accustomed to using. By administering non-traditional and non-competitive recreational activities, it provides students a safe environment to participate in, even if they are not familiar with traditional physical activities. This is key because many social and interpersonal relations may act as barriers to physical activity. Lack of support from friends, family or lack of time due to other responsibilities have shown to impact student participation in physical activity (Hsu et al. 2011). Many students also reported feeling discouraged from hearing the word "physical activity" (Hsu et al. 2011). Students have also expressed that they often felt obligated and isolated when asked about physical activity (Hsu et al. 2011). 45% of students also

reported that they found it difficult to balance their academic responsibilities along with physical activity guidelines. These findings were also very similar to a study done on older adults in Germany with 43% of participants acknowledging that they did not participate in physical activity due to a lack of company and that physical activity is for children (Moschny et al. 2011).

UBC's department of wellbeing has an informative web page devoted to health promotion, which is said to help individuals reach their desired state of health (Odonnell, 1988). The web page informs the reader about the detrimental effects of sedentary behaviours and provides them with the Canadian Physical Activity Guideline as a template. This web page, paired alongside Move UBC, can help educate students and faculty about physical activity benefits. This could lead to increase participation in Move UBC. UBC wellbeing, in partnership with other departments of health including the School of Kinesiology, provides students, staff, and faculty the opportunity to participate in countless events hosted on campus. One notable event is the peak stair challenge, where participants are restricted to only taking the stairs over other alternatives. It was reported annually that an estimated 500 participants climbed over 1,200 km in just 4 weeks which is the equivalent of traveling from Victoria to Saskatoon ("UBC Action Framework," 2017). 95% of participants noted that it had a beneficial impact on their lives and will continue to make healthy decisions in the future ("UBC Action Framework," 2017).

An important population in a school setting that we analyzed were students, as they comprise most the university's population. The Move UBC campaign hopes to improve the well-being of students through its health promotion initiative of getting people to be more active here on campus. Move UBC's goals and initiatives can be validated through a study conducted by Dunne and Somerset (2004), which investigated student's health needs and their views of health promotion at a University in the United Kingdom. Their study involved organizing thirty-one students into focus group discussions and surveying them about what physical activity and health promotion meant to them.

The three themes generated from the surveys, regarding health promotion at a university setting, were the role of health campaigns, considerations for success, and alternative interventions. In the role of health campaigns, students felt that these campaigns acted as a protective barrier against present and long-term health risks. An important aspect of campaigns that students found was that they could help students absorb information subconsciously, allowing them to use that information in the future. (Dunne and Somerset, 2004). The next theme regarding health promotion is one that our group has great interest in when looking at our Move UBC campaign. What will be a successful health promotion campaign? We agree with what participants stated in that the criteria for a successful campaign should include both behaviour change and the increased awareness for the topic the campaign is promoting. The last theme was concerned about alternative interventions, such as using targeted emails, website articles, and seminars to promote a healthy lifestyle. Using this article, we have a better understanding of student needs and desires regarding health promotion at universities. We will be using some of the criteria for success that these articles provide to help us evaluate Move UBC's campaign.

To conclude, with the information obtained from the literature of faculty and student participation in events regarding physical activity, we will now be able to accurately access

Move UBC. Through surveys we will be able to investigate physical activity barriers that currently prevent students and staff at UBC from participating in events. Additionally, through surveys, we will measure the effectiveness of Move UBC's advertisements, marketing strategies, and its ability to draw in the population of UBC.

METHODS

STUDY POPULATION

We decided to focus on the non-participant population of staff/faculty and students. To qualify for this study, participants had to be current students or staff/faculty members of UBC. This sample was chosen because each group possesses their own unique barriers to participation due to differences in scheduling, as well as differences in social and work commitments (Leininger and Adams, 2015). Through this study, we aimed to evaluate the effectiveness of current marketing strategies implemented by Move UBC and on how they can be improved. We were also interested in looking into whether non-participants are meeting the recommended weekly physical activity guidelines of 150 minutes of moderate-to-vigorous aerobic exercise per week while also gaining insight on their sedentary behaviours. By choosing these groups, it allowed us to delve deeper into what kinds of barriers affect participation levels in physical activity for each group.

DATA COLLECTION

A mixed-methods approach was used to collect data through an online survey. An online survey was chosen because it allowed participants to complete it in a space where they felt most comfortable and at a time most convenient to them. Some strengths for online surveys are that they can be sent out by the researchers in a time efficient manner (Evans and Mathur, 2005) and they can ask a multitude of different questions. Our survey contained ten questions, consisting of quantitative multiple-choice questions, yes/no, short answer and qualitative open-ended questions where the participant can write up their own response (Appendix C). With this survey structure, we obtained appropriate information while giving the participant the ability to leave further feedback. Along with the surveys there was a precluding consent disclaimer discussing the intentions of the survey at the very top of the Google Forms sheet (Appendix C). Surveys and consent forms were sent out during reading break. This time frame coincided with Move UBC's plans and while operations were in full swing, therefore, allowing us to measure Move UBC's complete marketing strategies. The survey used in this project were made with Google Forms. Surveys are less time consuming, are easier to do conduct, and can be done at any time which makes it easier for participants to complete within their busy schedules. By having the survey in an online format, it allows us to send the survey to more participants and allows participants to remain anonymous. Unlike using physical surveys, online surveys are also not limited by location if they are connected to Wi-Fi.

PARTICIPANT RECRUITMENT

When recruiting for participants we utilized snowball sampling as well as convenience sample methods. Snowball sampling was used to obtain participants for the staff/faculty and student groups. This is a method where research participants recruit other participants for a study. (Statistics How To, 2014). Teaching assistants, instructors, and colleagues will be asked to complete the survey and were also asked to forward their survey to their colleagues. Snowball sampling proved to be fruitful as already recruited participants would advertise the survey to others who shared similar characteristics to them. When sampling for student participants, we utilized convenience sampling by posting the survey into Facebook groups that mainly consist of UBC students in a variety of years and faculties. This type of non-probability sampling method is comprised of people who are easily accessible for a study (Stat Trek, 2019). This way, it allowed us to expose the survey to many potential participants that could submit a response to the survey. Consent to participate in the project was indicated by completion of the survey (Appendix C). By the end of the participant recruitment phase, we obtained a total of 22 responses, 13 students and 9 staff.

DATA ANALYSIS

For analyzing data, we examined the number of people who answered to our responses and displayed their responses in a variety of graphs. Some of the figures we will include in the project include bar graphs and pie charts to showcase their responses. Pie charts will be made from data collected from closed-ended questions where each response had its own section in the chart. Implementing pie charts allowed us to gain a better understanding of the distribution of barriers our population faced from the participants in our survey. Bar graphs were used to compare responses from the two groups (staff and students), which helped identify differences and similarities in barriers. When analyzing open-ended questions, we used a thematic approach. By adopting this kind of approach, it helped us organize participant responses and identify themes as well as similarities and differences. With the identification of key themes, this allowed us to ideate interventions that brought physical activity to the forefront and eliminated barriers. Once the data was analyzed, we used the findings to create a proper assessment of Move UBC's campaign along with suggestions of how to improve it for 2020. The types of questions we asked were related to whether the staff/faculty and student population were aware of Move UBC. If answered no, we asked which barriers lead to this outcome. We were also curious as to whether they believed campaigns designed to increase awareness on physical activity were effective in accomplishing their desired goals. Overall, from the survey, we were able to adequately answer questions relating to Move UBC's initiatives. Some of these questions included: Is Move UBC's campaign reaching their target audience? Which barriers restrict individuals from being physically active? and how effective is Move UBC in motivating the public?

RESULTS/FINDINGS

As for the perceived barriers to Move UBC events, all barriers are shown to be present in both groups. However, the frequency at which barriers appear differs between groups. The most prevalent barrier for students being that they live far from campus resulting in a long commute (n

= 6) which interferes with physical activity levels. Following that, being unaware of Move UBC (n = 2) and a lack of interest (n = 2) came second in student barriers. Lastly, students also indicated scheduling conflicts (n = 1) and that they are following their own exercise program (n = 1) as other barriers. Looking at perceived barriers for staff/faculty, the distribution of barriers is much more even when compared to students. Living too far/having a long commute (n = 2), scheduling conflicts (n = 2), being unaware of Move UBC events (n = 2), and a lack of interest (n = 2) were identified as the main barriers. In the open response option, one participant indicated that they felt like Move UBC was more for students (n = 1). Table 2 highlights the distribution and frequencies of barriers.

PA Engagement

With regards to physical activity engagement, results between students and staff/faculty are very different. 82% of all participants (n = 18) reported meeting the Canadian physical activity guideline of 150 minutes of moderate-to-vigorous activity per week. Our results also show that 92% of students (n = 12) report meeting the Canadian physical activity guidelines with 66% of staff/faculty (n = 6) meeting them. Refer to Table 3.

Barriers to PA

Delving further in physical activity engagement, we also determined perceived barriers for participants who did not meet physical activity guidelines. Of the staff/faculty group (n = 3), perceived barriers included a lack of time due to social and family responsibilities (n =1), memberships and equipment being too expensive (n = 1), and that engaging in physical activity is too difficult/tiring (n = 1). For students (n =1) the only perceived barrier was a lack of time due to family and other social responsibilities. Table 4 highlights the distribution of perceived barriers to physical activity.

PA Satisfaction

Satisfaction of physical activity levels were organized into themes indicating that the participant was either satisfied or not satisfied with their current physical activity levels. If a participant had indicated that they are not satisfied, they also stated factors which motivated them to become more active. These factors were also categorized into broader themes to better categorize them. 23% of student participants indicated that they were unsatisfied with their current physical activity levels (n = 3), stating that having friends to participate with (n = 1), having more time in the week (n = 2), and lower gym fees (n = 1) would help in increasing their physical activity levels. As for staff/faculty satisfaction, 44% reported being unsatisfied with their current physical activity levels. Participants indicated that having more time in their schedule (n = 2), being with others who value physical activity (n = 1), and better weather (n = 1) would be enough to motivate them. Refer to Table 5.

DISCUSSION

In our findings, we saw that 18% of our participants did not meet the physical activity guidelines of 150 min or more per week. We saw that external barriers were the main hurdle in

preventing people from meeting their physical activity goals. These barriers included lack of time due to academics and an absence of facilities within the area. This coincides with a study done by Arzu, Tuzun, and Eker (2006). In *Perceived Barriers to Physical Activity in University Students,* the researchers assessed a sample of 303 Turkish university students with a Likert scale on 12 items representing barriers to physical activity. A Likert Scale is a five (or seven) point scale which is used to allow the individual to express how much they agree or disagree with a particular statement. (Bowling, 1997). To the students, external barriers were perceived to be more significant than internal barriers to physical activity. Some of the external barriers included in that study were "lack of time due to busy lesson schedule" and "my parents give academic success priority over exercise" (Arzu, Tuzun, & Eker, 2006). Another similarity that we found to this study was that lack of time to exercise was the most prominent barrier for university students. This was also found in a study which reported that the greatest barrier to physical activity for high school students was time constraints due to school work, social and family activities. (Allison, Makin, and Dwyer, 1999).

Time constraint barriers are an issue many students face while attending university. According to University Canada, there were 1,034,000 full time students attending Canadian Universities in 2017, which represents most of the student population (60.8%). With a full course load for these students, exercising and doing other acts of physical activity may not be the priority during their school year. Students must spend a significant amount of their time attending classes, catching up with their readings and doing assignments throughout their week. Some students may also do extracurricular activities outside of school such as working part-time jobs or volunteering at a community centre. Another external barrier that students may face is the lack of available equipment or fitness facilities in their area. Our study found that 16% of participants (n = 25) faced this form of external barrier. UBC has approximately 55,887 total students with 14,934 staff/faculty here in the Lower Mainland (UBC Overview & Facts, 2018). With such many students and staff, some of them may not have access to fitness facilities where they live in the Lower Mainland area. Finally, the last barrier which 16% of participants perceived was the internal barrier of "too difficult and tiring." With 60.8% of Canadian University students being classified as full-time (University Canada, 2017), issues to wellbeing such as mental health and stress may arise in students. Some stressors students may face include pressure of getting acceptance into graduate school, completing a barrage of assignments, and taking exams. Physical activity can be an outlet to improve self-esteem and mood, however some students may feel tired or overwhelmed by some of the chronic stressors that they experience in University (University Canada, 2017).

Physically active, where they're active

In contrast to the participants who did not meet 150-minute physical guidelines, we found that most of our responders (81.8%) did meet these guidelines. 75% of these participants also indicated that they exercise within an organized setting such as a gym or a fitness class. The relationship between determinants of physical activity and a university student's level of physical activity and sedentary behaviour can be moderated by university characteristics (Deliens, Deforche, Bourdeaudhuij, and Clarys, 2015). These characteristics include residency, university lifestyle, exams, and academic pressure. Here at UBC, the campus itself includes a variety of settings to help promote physical activity within its student and staff population. There are gym facilities located in the Life Building and Recreation Building and a Bodyworks facility at the

Osborne Centre. Another factor for influencing physical and sedentary activities includes the physical environment itself, with regards to availability/accessibility, travel time/distance, and prices. (Deliens, Deforche, Bourdeaudhuij, and Clarys, 2015). Our group believes UBC does a good job in integrating physical activity throughout its physical environment on campus. There is a free week of all exercise classes at the start of semesters to give students the opportunity to participate in activities without worrying about costs. The recreation facilities are also conveniently located near the major bus loop to travel to if commuting using public transit. Finally, events such as the February Move UBC month help promote accessibility and awareness to physical activity throughout the duration of the month and in a variety of places located around the UBC campus.

With regards to the Move UBC initiative, we found that 63.6% of our survey participants were aware of the Move UBC Campaign. However, most respondents (63.6%) did not participate in any Move UBC events. Some of the prominent barriers to participating in these events were living too far off campus and having a scheduling conflict. The commuting issue is an important one with approximately 70,821 students and staff attending the UBC Vancouver campus. Some of the Move UBC events were held later in the day around 4:00 p.m. and 6:00 p.m. These times conflict with students who want to go back home after class and do not want to stay on campus. Other barriers to participating in Move UBC events included scheduling conflicts with classes, not being aware of the events, and following their own exercise program. The individuals following their own exercise program is important, because it signals a commitment to physical fitness. Our survey found that 90.9% of our participants thought of physical fitness as an integral component of their lifestyle. We believe this is important because some students may take their summer off or take a lighter course load throughout the year. In this case, they free up some time in their schedule allowing them to participate in physical activity to benefit their wellbeing.

Move UBC and participation

Finally, we found a variety of responses to our questions, which were: if people thought Move UBC was successful in getting more students/staff active, and if participants were satisfied with their level of physical activity. We asked these qualitative questions to see if we could find common themes amongst the responses. From those that thought Move UBC was not successful, participants felt they were not sold enough on the premise of the physical activity event to devote their time to go. This may be related to some of the time constraints they face as students. In contrast, participants who thought that Move UBC was successful thought it was well received and did get students and staff more engaged in physical activity. In answering the fitness satisfaction question, 81.8% of participants were satisfied with their current level of fitness. This is a question unique to each individual as we all have our own standard of satisfaction as it pertains to out physical activity level. In our responses, some participants included a part of their fitness goals such as “aiming to get more toned.” For the 18.9% not satisfied with their fitness, we saw a common theme for three out of the four responses. The follow up question asked what would motivate them to reach a satisfaction with their physical activity level, we saw that these participants would be motivated by having a social group around them. The social network is a prominent determinant of physical activity seen in university students (Deliens, Deforche, Bourdeaudhuij, and Clarys, 2015). Social networks provide a modelling example for new students doing physical activities as they can learn from their peers who are more experienced.

Social networks also present a support system for students where their friends can motivate and guide them in physical activity. This support and modelling system contribute to the overall enjoyment of students, where they may not enjoy physical activity individually, but will have fun being active in the presence of their peers. Finally, the last barrier to satisfaction was being more motivated if gym prices were lower and having free classes to exercise. UBC does have free classes but it is important to consider to the range of socio-economic profiles of university students. (Arzu, Tuzun, and Eker, 2006). There are gym membership fees and locker use fees that may not be accessible to all students for use of UBC's fitness facilities. We also must consider that students may choose cheaper fitness facilities that are easier to access by travelling since they are closer to their homes.

Limitation/Challenges and Improvements

In the creation of this report, our group faced several challenges which limited the scope of our study. The first challenge we faced was our group's overall inexperience in data collection. Our group consisted of four undergraduate students who have had no prior experience in collecting data in any scale. However, our group had the opportunity to complete the Tri-Council Policy Statement (TCPS) 2 Tutorial on the Ethical Conduct for Research Involving Humans. This data collection module was valuable in improving our group's knowledge on research and how to collect data in an efficient and ethical manner. The second challenge that occurred was that we had more responses (25) for our " if answered no to meeting the physical activity guideline, which barrier applies to you" question. We only had 22 participants at the end of the survey. We think that some of the participants who answered "yes" still completed that section of the survey, so we will work on making questions like that clearer not to answer through the usage of coloured font and font size.

Our sample size of the study was also limited since our group was struggling to get participants to complete our survey. We ended up sending it to our friend groups in UBC, some of which were in the same faculty as us (Kinesiology). The staff participation also had a higher proportion of Kinesiology faculty, with our group not developing large enough social circles. This probably resulted in the high satisfaction levels of fitness and the majority of participants considering physical activity an important component of their lifestyle. Another component of this challenge is that we were dealing with our own time constraints as four full-time students. We think that if given a longer timeframe for our study, we can get a larger student sample size here at UBC to participate from more faculties (ex: Forestry, Engineering, etc.). Ways to do this include posting in various faculty social media groups and sending out more emails to students and staff. It would also allow us to improve our data collection skills by incorporating other methods such as interviews.

Further Research

There are several further research opportunities relating to the physical barriers of Canadian university students. For example, more research can be done at universities of other provinces on their own students. A meta-analysis can then be conducted to see common trends and themes of university students throughout Canada. More research can be done on socioeconomic status of students and how that contributes as a barrier to physical activity. Finally, more research can be done on our North American sedentary culture involving

electronics and how that affects Canadian university students. We should also consider how diverse Canada is with many cultures that can influence one's view on physical activity.

RECOMMENDATIONS

Although 63.3% of individuals in our sample were aware of Move UBC's campaign, only 36.4% participated in these events. After taking a closer look into the barriers which restricted their participation, it was found that 52.9% of individuals stated they either lived too far away or due to a lengthy commute. One recommendation we can provide is to increase the geographical area in which these events take place. To increase participation levels, it would be beneficial to target individuals who live off-campus. If events were hosted off-campus, it would accommodate to individuals who feel they live too far away to participate. 47% of individuals did not participate in events due to lack of interest and unawareness of events. To target this sample of individuals, further attention needs to be put on effective marketing tactics to increase awareness. This may include handing out brochures with information about the campaign, the organization of educational events to further explain Move UBC's goals and visions, and to distribute items such as magnets, stickers, etc. These items will act as a reminder which would further increase participation levels.

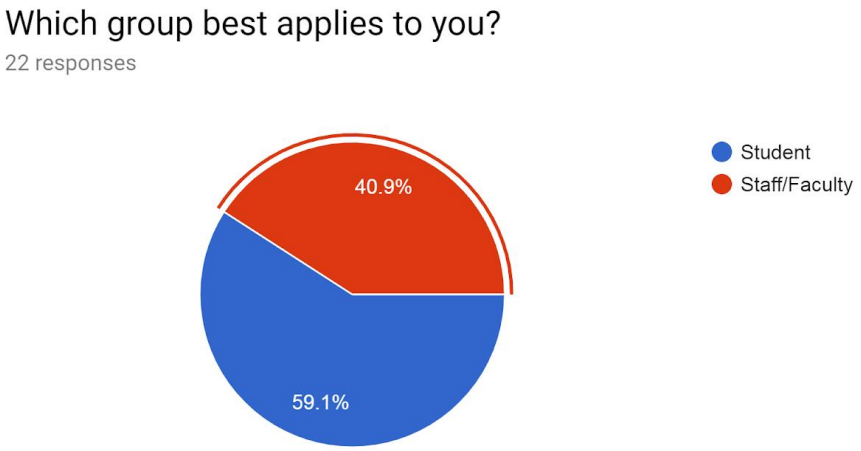
Other ways to increase participation levels include giving class incentives for students to participate in Move UBC events. Some classes like Psychology 102 give extra credit used towards one's percentage of the course when participating in the Psychology department's research studies. Classes throughout campus can give a voluntary option like this to participate in Move UBC events to help boost student's grade, providing them with a meaningful incentive and help get incorporate added physical activity in their day. With this incentive more students will feel like these events will be worth their time as they provide a percentage boost for their classes. Maybe this recommendation can alleviate some of the time constraint barriers some students may face. Another way to gain incentives making an app like the Carrot Health Rewards App developed here in BC. People who participate in Move UBC events can gain rewards around campus through the app. Some perks could include discounts at food/beverage places at the campus Subway or Starbucks. Another incentive could be that if you attend a certain number of Move UBC events you can attend a free fitness class or receive discounts on a UBC fitness facility membership, all done through this Move UBC app. This potential app can be easily accessible due to the abundance of electronic devices students use these days and distributed to a wide range of the student population through the app store.

Finally Move UBC can do more to promote itself throughout the year through various digital mediums. Social media pages on Facebook, Twitter, and Instagram can promote the message that can be shared by students with online access. This macro environment represents a determinant of physical activity in media/advertising (Deliens, Deforche, Bourdeaudhuij, and Clarys, 2015). We think that if Move UBC establishes a social media foundation and continues their current advertising campaign methods participation will increase over time. We must consider that Move UBC is a new initiative with its first Move UBC month this past February. However, with 63.6% of our survey participants already aware of its message, we are confident that number will grow as this health initiative evolves through feedback and adaptations in the future.

APPENDICES

APPENDIX A

Question 1



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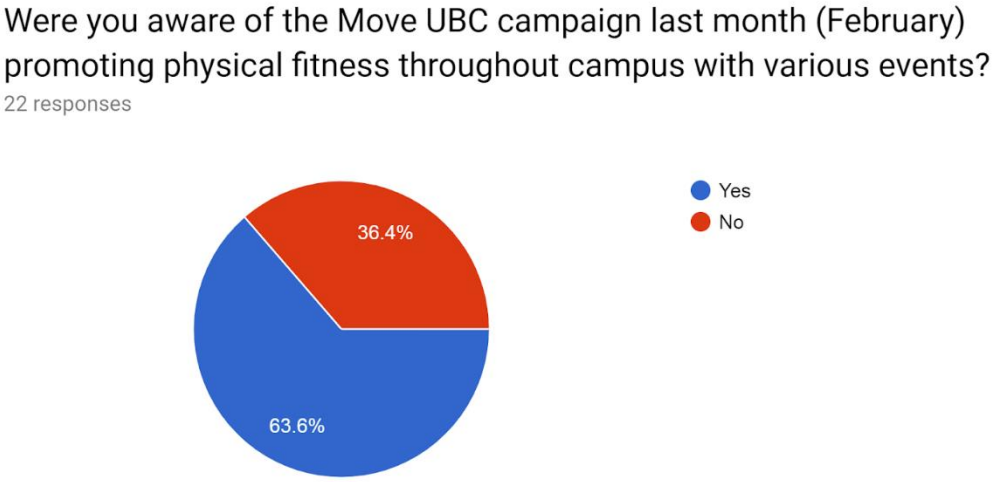

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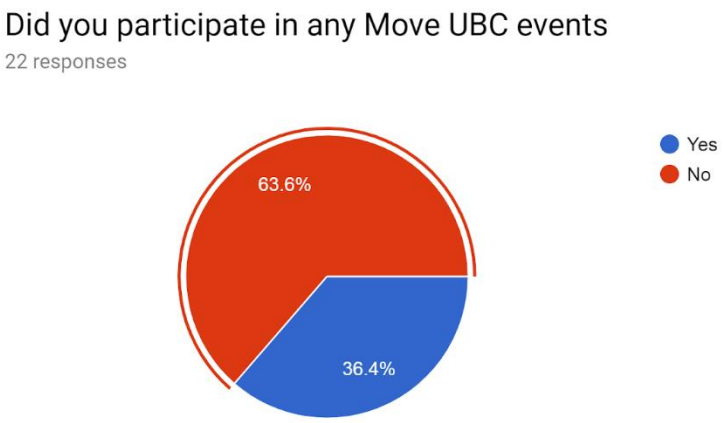

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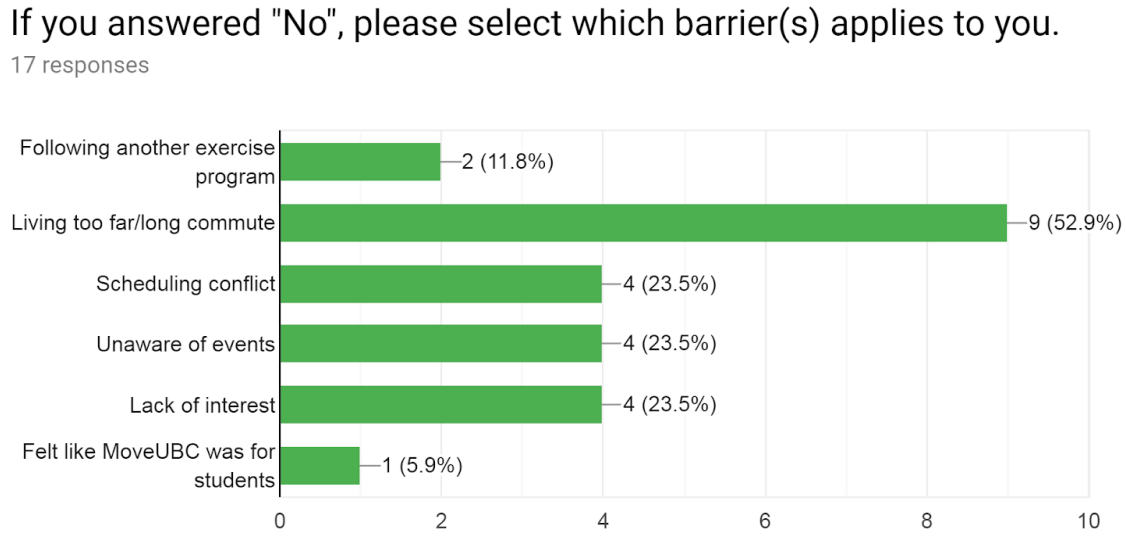
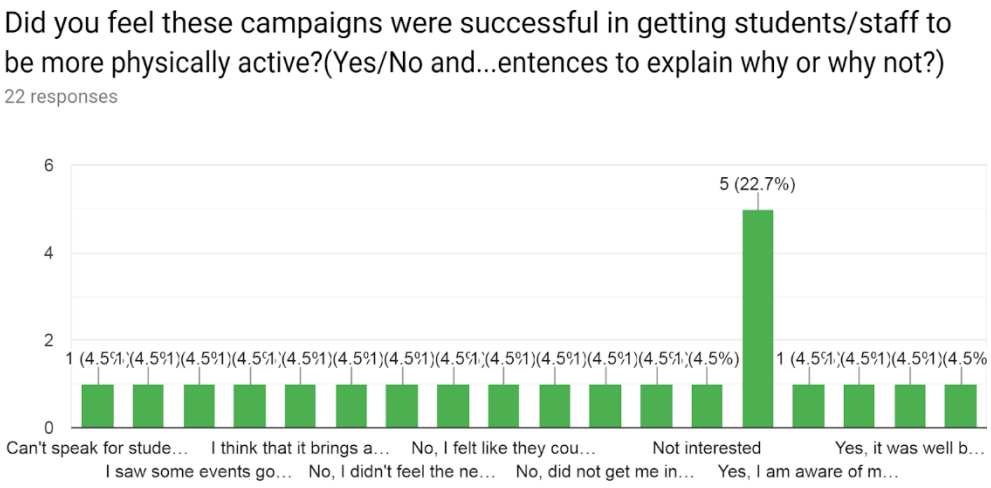
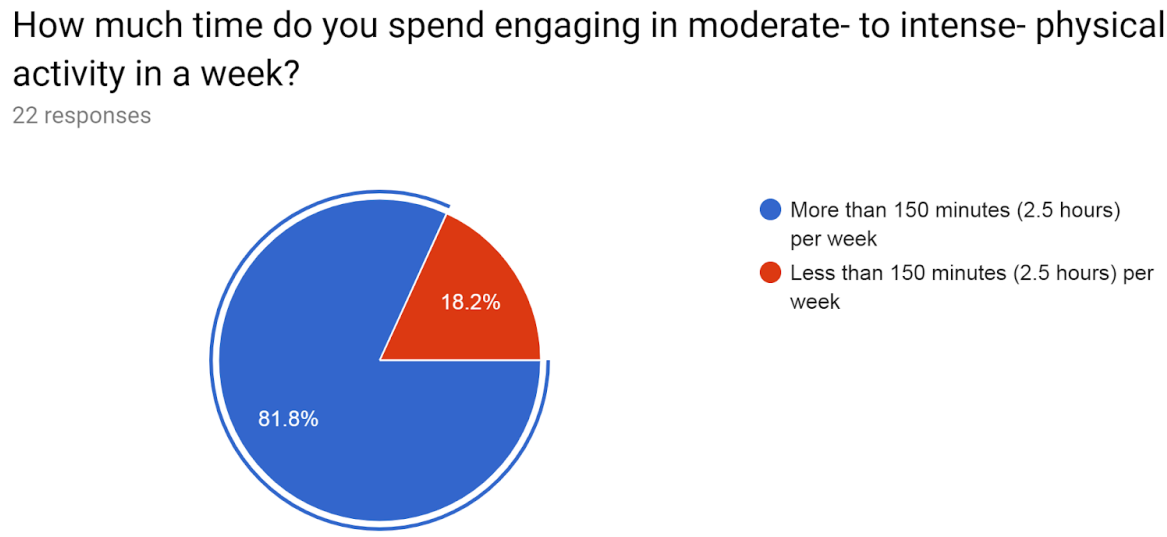


Question 5



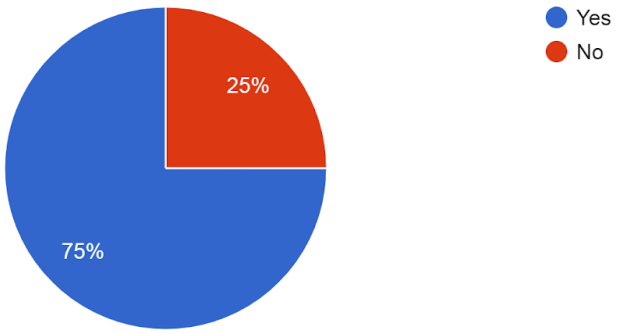
Question 6



Question 7

If you spend MORE than 150 minutes per week exercising, do you exercise in an organised setting (Ex. in a gym or in drop-in classes)

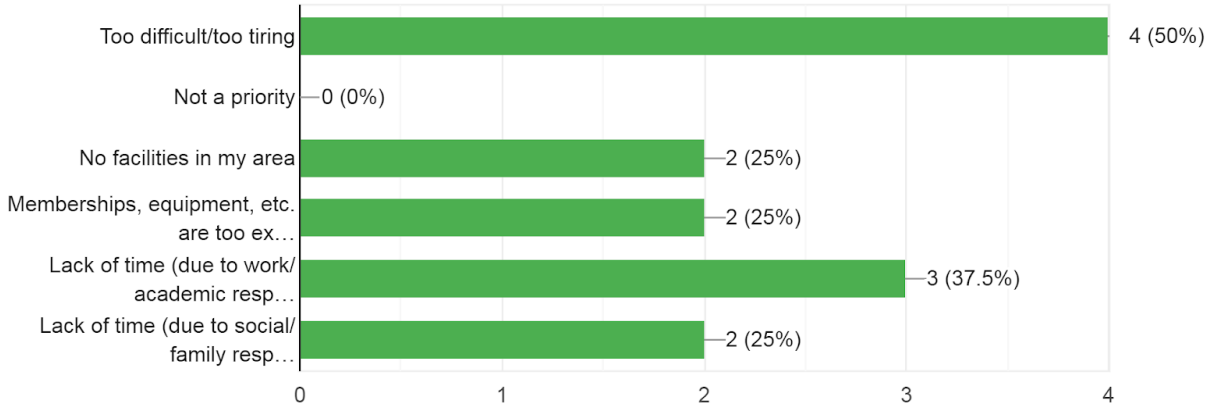
20 responses



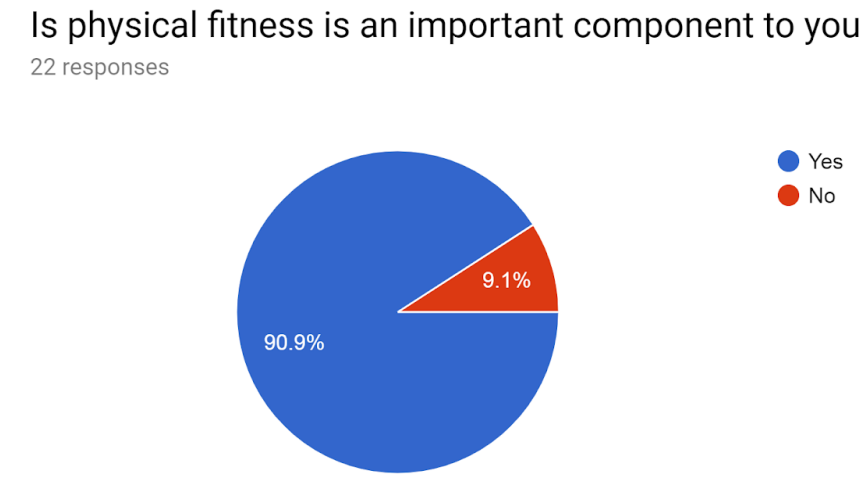
Question 8

If you spend LESS than 150 minutes per week exercising, please select which barrier(s) applies to you.

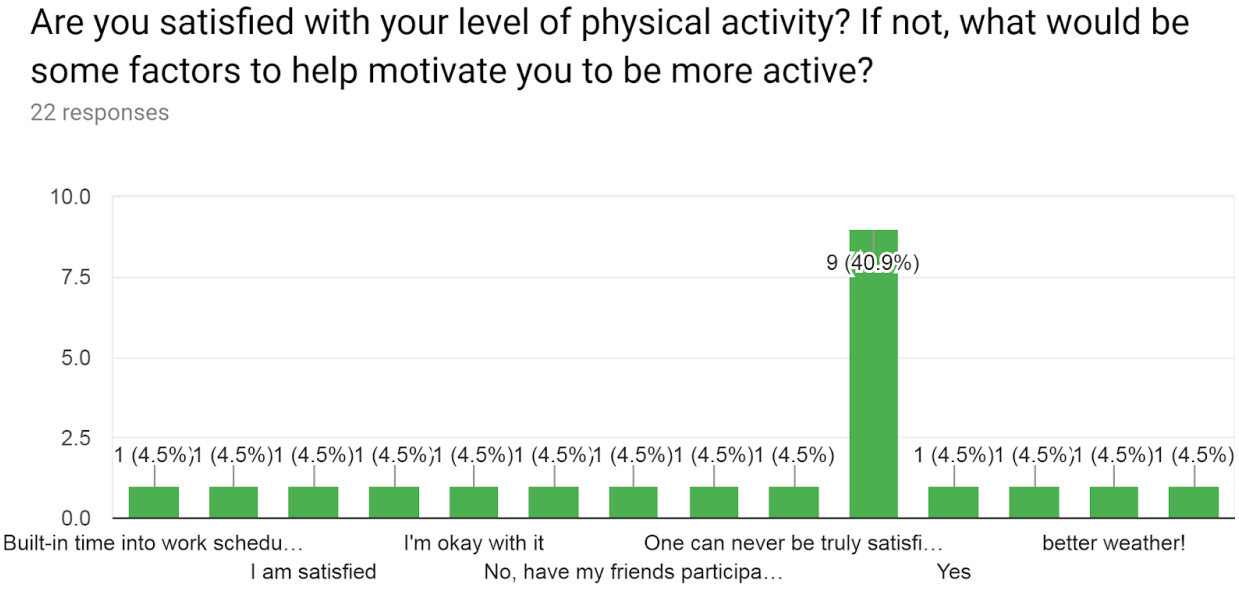
8 responses



Question 9



Question 10



APPENDIX B

Table 1. - Participation rates by group

	Participants		Non-participants	
Group	n	%	n	%
Students	5	38	8	62
Staff/Faculty	3	33	6	67
Total	8	36	14	64

Note: Total percentage is a percentage of the total research sample (n = 22).

Table 2. - Awareness of Move UBC by group

	Aware of Move UBC		Unaware of Move UBC	
	n	%	n	%
Students	8	62	5	38
Staff/Faculty	7	78	2	22
Total	15	68	7	32

Note: Total percentage is a percentage of the total research sample (n = 22).

Table 3. - Awareness of Move UBC by event participants

	Aware of Move UBC		Unaware of Move UBC	
	n	%	n	%
Participation	7	100	0	0
Non-participation	8	53	7	47

Appendix B

Table 4. - Perceived Barriers to Move UBC by group

	Student		Staff/Faculty		Total	
Barriers	n	%	n	%	n	%
Following exercise program	1	9	0	0	1	5
Living too far/Long commute	5	45	2	22	7	35
Scheduling Conflicts	1	9	2	22	3	15
Unaware of events	2	18	2	22	4	20
Lack of Interest	2	18	2	22	4	20
Other	0	0	1	11	1	5

Table 5. - Physical Activity Recommendations by group

	Less than 150 min/week		More than 150 min/week	
Group	n	%	n	%
Students	1	8	12	33
Staff/Faculty	3	92	6	66
Total	4	18	18	82

Note: Total percentage is a percentage of the total research sample (n = 22).

Table 6. - Exercising Setting preference by groups

	Organizes Setting		Unorganized Setting	
Group	n	%	n	%
Students	11	92	1	8
Staff/Faculty	3	50	3	50

Total	14	78	4	22

Note: Total percentage is a percentage of the the participant sample who meet the weekly physical activity guidelines (n = 18)

Appendix B

Table 7. - Barriers to physical activity by group

	Student		Staff/Faculty		Total	
Barriers	n	%	n	%	n	%
Too difficult/too tiring	0	0	1	25	1	20
Not a priority	0	0	0	0	0	0
No facilities in my area	0	0	1	25	1	20
Memberships, equipment, etc. are too expensive	0	0	1	25	1	20
Lack of time (due to work/academic responsibilities)	0	0	0	0	0	0
Lack of time (due to social/family responsibilities)	1	100	1	25	2	40

Table 8. - Satisfaction of current physical activity levels by group

	Satisfied		Unsatisfied	
	n	%	n	%
Students	10	77	3	23
Staff/Faculty	5	56	4	44
Total	15	68	7	32

Note: Total percentage is a percentage of the total research sample (n = 22).

APPENDIX C

KIN 464 Barriers to Move UBC Survey

PLEASE READ BEFORE STARTING THE SURVEY

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

Completion of the survey indicates that you consent to participate in this study.

* Required

Which group best applies to you? *

- ◯ Student
- ◯ Staff/Faculty

Were you aware of the Move UBC campaign last month (February) promoting physical fitness throughout campus with various events? *

- ◯ Yes
- ◯ No

Did you participate in any Move UBC events? *

- ◯ Yes
- ◯ No

If you answered "No", please select which barrier(s) applies to you.

- ☐ Following another exercise program
- ☐ Living too far/long commute
- ☐ Scheduling conflict
- ☐ Unaware of events
- ☐ Lack of interest
- ☐ Other: _____

Did you feel these campaigns were successful in getting students/staff to be more physically active?(Yes/No and a few sentences to explain why or why not?) *

Your answer

How much time do you spend engaging in moderate- to intense-physical activity in a week? *

- ◯ More than 150 minutes (2.5 hours) per week
- ◯ Less than 150 minutes (2.5 hours) per week

If you spend MORE than 150 minutes per week exercising, do you exercise in an organised setting (Ex. in a gym or in drop-in classes)

- ○ Yes
- ○ No

If you spend LESS than 150 minutes per week exercising, please select which barrier(s) applies to you.

- ☐ Too difficult/too tiring
- ☐ Not a priority
- ☐ No facilities in my area
- ☐ Memberships, equipment, etc. are too expensive
- ☐ Lack of time (due to work/academic responsibilities)
- ☐ Lack of time (due to social/family responsibiliteis)
- ☐ Other: _____

Is physical fitness is an important component to your lifestyle? *

- ○ Yes
- ○ No
- ○ Other: _____

Are you satisfied with your level of physical activity? If not, what would be some factors to help motivate you to be more active?

Your answer

SUBMIT

Never submit passwords through Google Forms.

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