

University of British Columbia

Social Ecological Economic Development Studies (SEEDS) Sustainability Program

Student Research Report

# Assessing Student Perspective of UBC's "Movement Breaks" Services in the Classroom

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Prepared for: Health Promotion and Physical Activity

Course Code: KIN 464

University of British Columbia

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Assessing Student Perspective of UBC's "Movement Breaks" Services in the Classroom

Group # 13 (Project G)

Health Promotion and Physical Activity (KIN 464)

School of Kinesiology

University of British Columbia

## Executive Summary

Move U Crew is determined to improve the campus wellbeing by offering movement breaks in diverse settings (“Move U Crew,” n.d.). These settings range from classrooms, conferences, meetings, etc. (“Move U Crew,” n.d.). When providing breaks, they have a specific goal and task they are striving to achieve. This goal is to increase physical activity while minimizing sedentary behaviors (inactiveness) through engaging students, staff and faculty to make time to recognize the importance of movement (“Move U Crew,” n.d.). It is important to have students understand the importance of movement and be able to incorporate movement breaks in their lifestyle. This is because university students spend 7-9 hours engaging in sedentary behaviours such as sitting than the average young adult population (Castro et al., 2020). The importance of incorporating movement breaks is beneficial in multiple domains including mental, physical, emotional and spiritual. According to Castro et al., (2020), engagement of movement breaks decrease anxiety, depression, several chronic diseases, diabetes and mortality while increasing academic performance.

To better understand the accessibility MOVE U Crew provides for university students, quantitative and qualitative methods were used in a Qualtrics survey. This study surveyed 43 university students who are currently enrolled at The University of British Columbia. In 2 weeks, the findings revealed UBC students lacked awareness of who the MOVE U Crew is, and the barriers students faced, preventing them from participating in movement breaks. Due to these results, some recommendations can be made for the MOVE U Crew to increase accessibility for UBC students to increase engagement in movement breaks. These recommendations are to promote movement breaks, how to increase awareness, how to address barriers for time constraint, and how to increase accessibility to equipment.

## **Introduction and Literature Review**

The meta-analysis done by Castro et al., (2020), shows that engaging in high volumes of sedentary behavior has been recognized as a risk factor for premature death and several chronic diseases. In addition, high levels of sedentary behavior increase the risk of insulin resistance which leads to cardiovascular disease, type 2 diabetes, and all-cause mortality (Henson et al, 2018). Moreover, high levels of sedentary behavior also have an impact on mental well-being, which leads to an increased risk of anxiety and depression (Castro et al., 2020). A recent meta-analysis (Castro et al., 2020) found that most university students engage in higher levels of self-reported sedentary time compared to the general young adult population, and the data show positive and non-linear associations between self-reported sitting and cardiometabolic/mortality outcomes across 34 studies. Therefore, university students are at risk of engaging in increased amounts of sedentary behavior and are not only similar to office workers, but likely to exceed them in terms of sedentary behavior levels (Castro et al., 2020). According to Castro et al., (2020), the high levels of sedentary behavior in university students might be explained by the activities that they usually perform, requiring long periods of sitting (e.g. studying, writing assignments, attending lectures). The Canadian 24-hour Movement Guidelines (n.d.) state that minimizing sedentary time can lead to health benefits. However, university students cannot meet these health benefits when they spend about 30 hours sitting in lectures per week (Hostend, et al., 2019). With data of self-reported sedentary time from 110,214 participants, it indicates that university students spend an average of 7.29h to 9.28h per day sitting (Castro et al., 2020). According to Castro et al., (2020), all-cause and cardiovascular mortality increases at the threshold of 7 to 8 hours of sitting per day, students have high risks of negative health consequences. There is evidence suggesting that time spent in sedentary behavior is increasing,

thus movement breaks should be encouraged and applied to all schools (Castro et al., 2020). By incorporating movement breaks during lectures, it will help decrease time spent sitting and allow students to have a quick brain break. Movement breaks have been found to improve academic performance and the overall health and well-being of students in university (Peiris et al., 2021). Peiris et al., (2021) also found that the addition of movement breaks led students to engage in more physical activity outside of class and increased their focus in class complying with The Canadian 24-hour Movement Guidelines stating these health benefits. By incorporating movement breaks in schools, students are learning to engage in physical activity, decrease high levels of sedentary behavior and are moving towards living a healthier lifestyle.

The University of British Columbia is working to combat issues of sedentary behaviours with Move U Crew leading movement breaks. Move U Crew is a group of individuals whose goal is to encourage and promote student, staff, and faculty lifestyles by increasing movement through the day to prevent sedentary lifestyles and habits. Sedentary lifestyle or habits can be defined as a lifestyle filled with inactivity and/or when we spend most of our day sitting (ex: an office job, in class, driving job, etc.) (Merriam-Webster. (n.d.)). However, Move U Crew combats this issue of a sedentary lifestyle by offering short movement breaks that last for 5 to 15 minutes. Additionally, it is completely free making it accessible for the population target regardless of their socio-economic status. Their movement breaks consist of either a short stretching routine, fitness/ light exercise or a short dance routine that can be performed in the classroom. This solves the issue of engagement in sedentary behaviours for this target population at The University of British Columbia.

With what is now known about the risks that come with a sedentary lifestyle amongst university students, such as the increased likelihood of depression, cardiovascular complications,

and diabetes later on in life (Castro et al., 2020), the implementation of movement breaks aims to counteract these potential hazards. However, there is a demographic of students that is being overlooked when movement breaks occur: students facing barriers towards accessibility preventing them from participating in their daily dose of physical activity. For the purpose of this study, we will look at how the movement break initiative accounts for students who face barriers towards accessibility. The hope is that with further research, more can be done to be as inclusive as possible to ensure all students can reap the benefits of physical activity and have the potential to lead a more active life.

### **Methods**

An online survey made from Qualtrics was used for the research and all participants were required to scan a code that would redirect them to a page where they can complete the survey online. Since the purpose of the study is to see how accessible Move U is for students, we included questions regarding the accessibility of Move U programs. The survey consisted of 13 questions which started off by asking the age range of the participants, the ages were categorized from age 18 to 37, dividing them into 4 year ranges (example: 18 to 22) and so on till age 37. An “other” option was also provided to include those who did not fit the provided ranges. The survey then transitioned into questions related to Move U and accessibility. Open-ended questions were also included to diversify responses and to gain further insight on participant experiences with Move U and accessibility needs. A QR code was created and posted around various campus spaces to provide students easy access to the survey. The QR code was also shared on social media platforms to increase student engagement. The duration of the survey was around two weeks and was closed on March 28th in order to provide adequate time to analyze the responses.

For data analysis, a mixed approach with both quantitative and qualitative methods was used. To find the age prevalence of the participant responses, data collected from the Qualtrics site was transferred to excel for further analysis. A qualitative approach was used to analyze the open-ended questions on the survey. Each response was read through in order to find similarities and common themes among participant answers. The results of the data will be further elaborated on under the results and findings section.

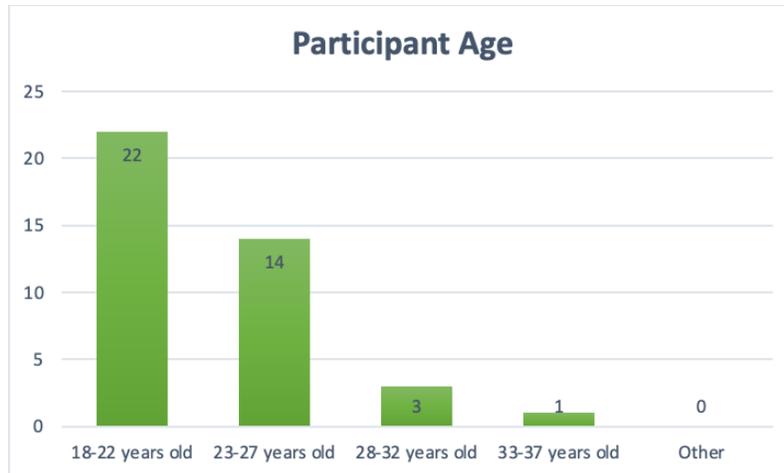
## **Results**

Following the results of our project, we had a total of 43 individuals take part in our survey, with 1 individual being unable to complete the survey consent form. The survey consists of 12 obligatory questions that will help with our dataset, a 13th question is added at the of the survey for participants to add feedback or recommendations to the MOVE U Crew if they wish. Our data consists strictly of the responses garnered from our survey, incorporating a combination of qualitative (describing and analyzing responses provided by participants) and quantitative (providing charts and graphs displaying data) approaches.

Figure 1 represents a total of 40 participants answering a question about their age, with answers ranging from 22 participants selecting “18-22 years”, 14 participants selecting “23-27 years”, 3 responses for “28-32 years”, and 1 participant selecting “33-37 years”.

### **Figure 1.**

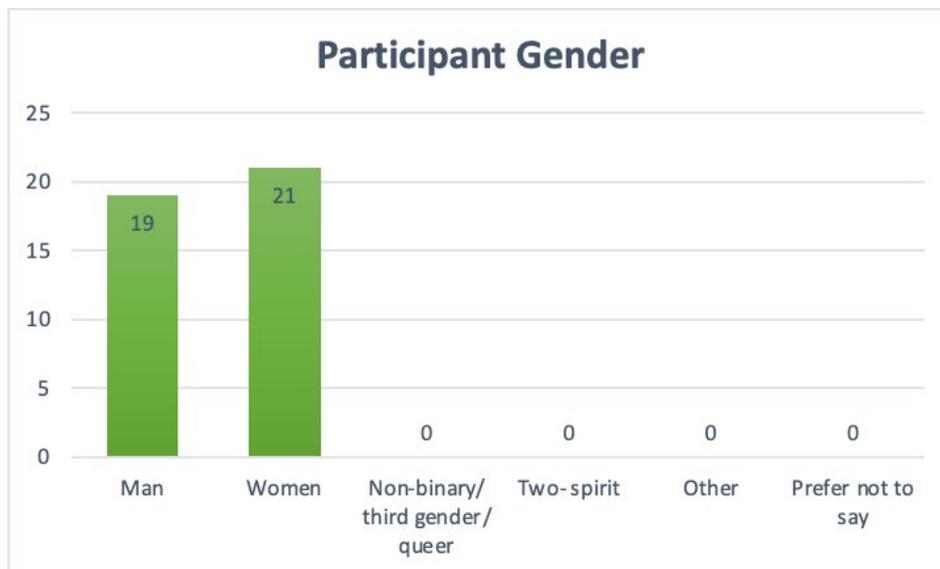
*Participant Age*



The survey's second question focuses again on the demographic of the participants, asking them to state their gender. The results were spread out fairly evenly - of the 40 participants that answered this question, 21 identified themselves as women, while 19 identified as men (Figure 2).

**Figure 2.**

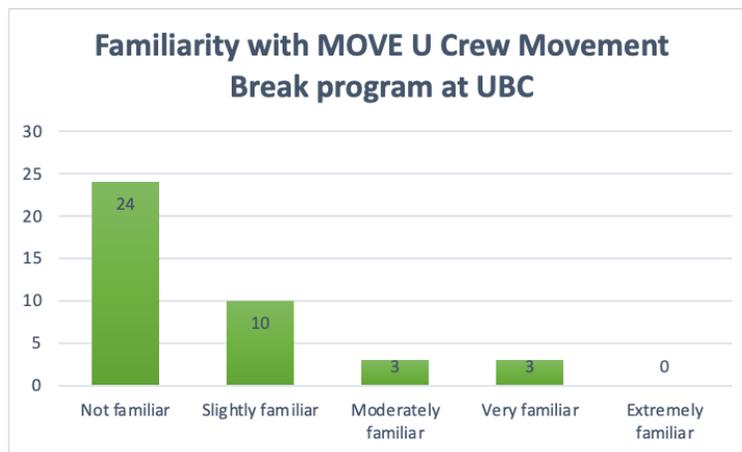
*Participant Gender.*



The third question illustrates the participants' familiarity with the Move U Movement Break initiative at UBC with answers ranging from: "Not familiar", "Slightly familiar", "Moderately familiar", "Very familiar", and "Extremely familiar". The x-axis denotes the choices that participants can choose from (not familiar, slightly familiar, moderately familiar, very familiar), while the y-axis displays the amount of responses each option received (Figure 3). From the data collected of 40 participant answers, over half (24) of the participants answered that they were not familiar with the initiative, while 10 answered that they were somewhat or slightly familiar. 3 participants selected that they were either moderately or very familiar with the initiative respectively. The results from the data shows that the MOVE U Crew movement break initiative is not something that is well received or promoted at UBC.

**Figure 3.**

*Familiarity with MOVE U Crew Movement Break Program at UBC*

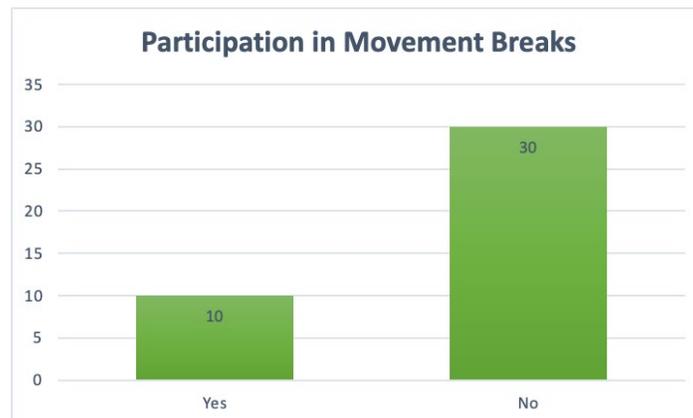


Question 4 gauges whether or not participants had engaged in a MOVE U Crew movement break. Surprisingly, out of 40 individuals who answered, only 10 had confirmed that they had participated in a movement break (Figure 4). The x-axis represents choices that individuals either do or do not participate in movement breaks, while the y-axis represents the

amount of responses per option. The data suggests again that the movement break initiative is something that has not been facilitated in enough classrooms for participant recognition.

**Figure 4.**

*Participation in Movement Breaks*



For question 5, we asked the participants to describe the types of movements they took part in if they answered “Yes” in question 4. If participants answered “No”, we asked them to explain why that was the case. There were 16 total responses from participants. For the individuals that answered “Yes”, most of the answers seemed to stem from the Movement U Crew presenting stretching or stationary exercises for students to follow, with one participant stating that movements consisted of “mostly sitting activities and some stretching”. A similar sentiment was made by another participant stating they partook in “stretching activities, movements from a chair”. Another individual states that on top of stretching, cardio work was involved in one of the breaks, explaining that there was “running on the spot” during the break.

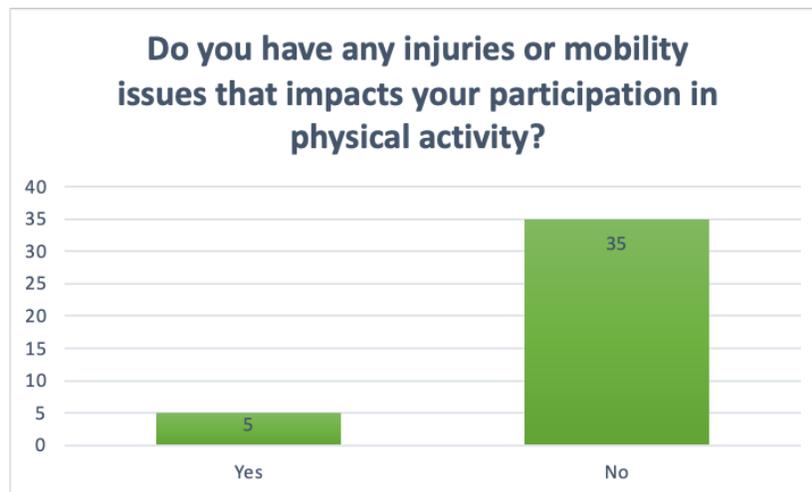
For the individuals that answered “No”, our group had anticipated that injuries or range of motion issues were going to be a key reason why. However, upon analyzing the results these

individuals stated that they were not familiar with the Movement U Crew at all, with one participant exclaiming “I didn’t know that was a thing!”. Another participant went on to state “I have never seen them in any of my classrooms”.

Question 6 asks participants if they have any injury or mobility issues that impact engagement in physical activity. Out of 40 responses, 35 (87.5%) selected “No”, while the remaining 5 (12.5%) said “Yes” (Figure 5). The data collected from the question suggests that the participants for the most part, are able to participate in physical activity without bodily restrictions or ailments

**Figure 5.**

*Injuries or mobility issues that impact participation in physical activity.*

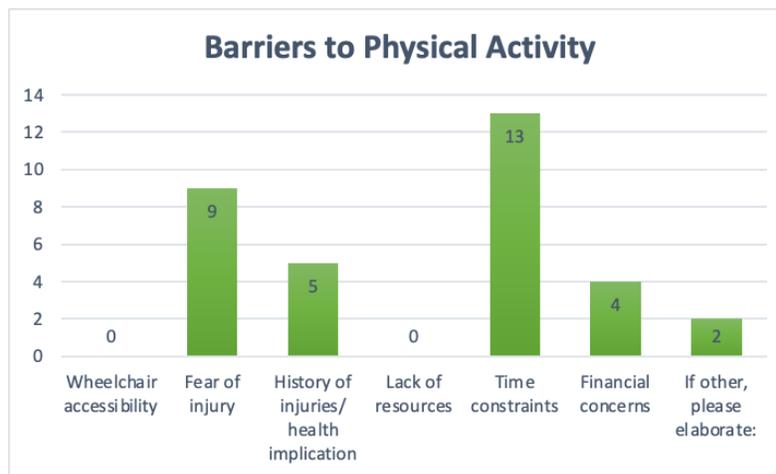


Question 7 asks about potential barriers experienced by the participants in the survey that impact physical activity. Figure 6 presents how 33 participants answered this question. The x-axis represents the choices participants could select from (Wheelchair accessibility, fear of injury, history of injuries/health implications, lack of resources, time constraints, financial concerns, or if other please elaborate). The y-axis represents the amount of responses per option.

Time constraints was the answer that garnered the most responses, with 13 selecting this option. Fear of injury was second, with 9 participants choosing this as a barrier. History of injuries had 5 responses, while financial concerns had 4. The “other” option had 2 responses, in which we asked the participants to elaborate further. One participant had stated lack of energy was a barrier. The other response was disqualified due to a non-related answer.

**Figure 6.**

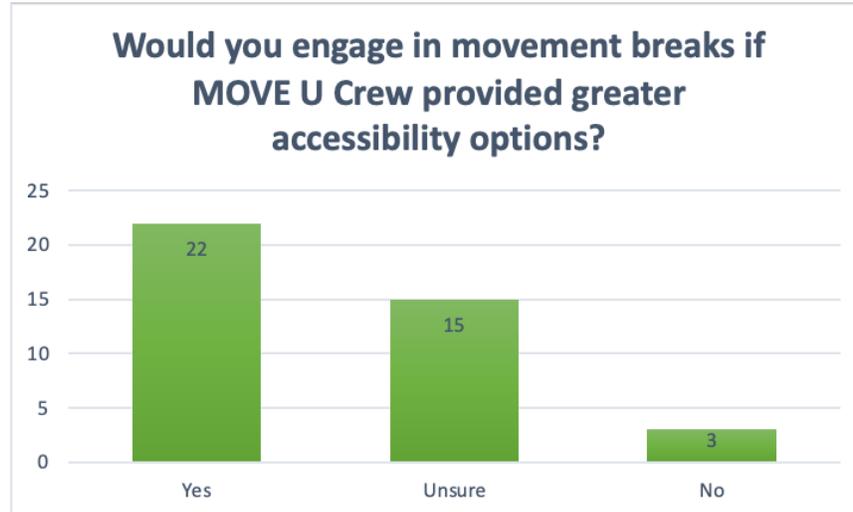
*Barriers to Physical Activity.*



For question 8, we asked participants whether or not they would engage in movement breaks if the MOVE U Crew offered more accessibility for their exercises. This question garnered 40 responses, with 22 stating “Yes”, 15 participants were unsure, while only 3 selected “No.” (Figure 7). What this data could represent, specifically when speaking to those that were unsure, is that this is a segment from our sample in which have not participated in movement breaks prior and would need to gain first-hand experience in order to decide whether or not the initiative is beneficial. The x-axis represents the options that participants can select from (yes, unsure, or no), while the y-axis displays the amount of responses garnered from each option.

**Figure 7.**

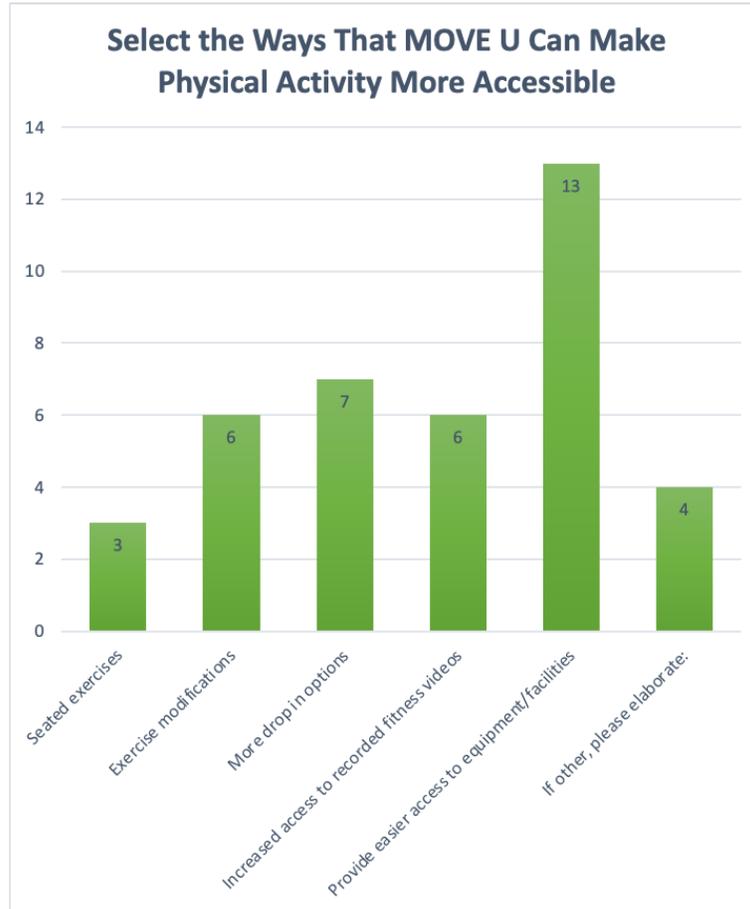
*Would you engage in movement breaks if MOVE U Crew provided greater accessibility options?*



In question 9, participants were asked to select ways they felt the MOVE U crew could make physical activity more accessible. The question garnered 39 responses, the most popular selection was for the MOVE U Crew to provide easier access to equipment and facilities (13 participants). The rest of the selections were spread out more evenly in terms of responses. 7 participants felt that more drop-in options would increase accessibility. 6 individuals felt that exercise modifications and increasing access to recorded fitness videos could increase accessibility, respectively. 3 participants selected “Seated exercises” as an option. The remaining 4 participants selected “Other”, in which they were asked to describe alternative ways to increase accessibility (Figure 8). 3 out of the 4 participants provided answers. One stated “All of the above” options would increase accessibility. Another stated “providing more locations to access activities”, while the final participant simply stated “moving around” would increase accessibility. The x-axis displays the options that participants can select from, while the y-axis is representative of the responses each option had.

**Figure 8.**

Select the ways that MOVE U can make physical activity more accessible.

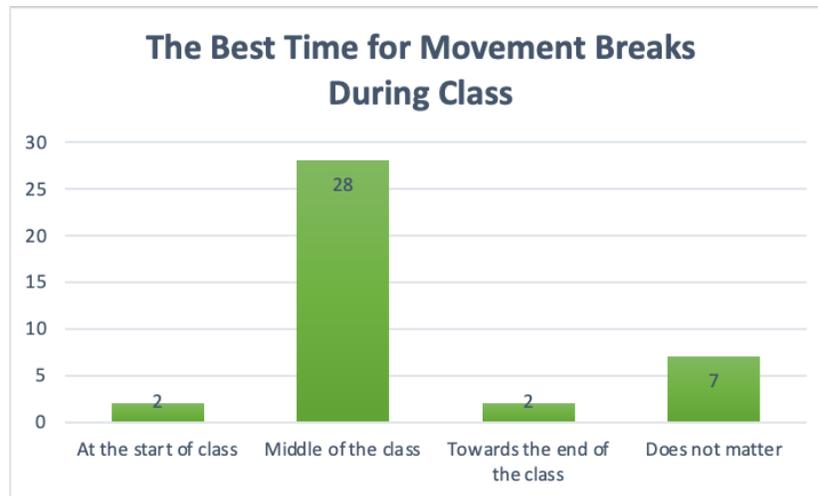


Question 10 asked participants when they felt the best time during class was for a movement break to occur. Out of 39 individuals, the overwhelming majority (28) selected the middle of the class as the optimal time for movement breaks to be initiated. 7 participants stated that it did not matter when the movement breaks occurred, while 2 individuals stated that they would prefer the movement breaks to occur at the start or towards the end of class respectively (Figure 9). The data would suggest that participants feel a lull in their energy levels during class, and that a movement break in the middle would re-engage them in the lecture. The x-axis

represents the times in class in which participants felt that movement breaks should be initiated, while the y-axis displays the responses for each time in class.

**Figure 9.**

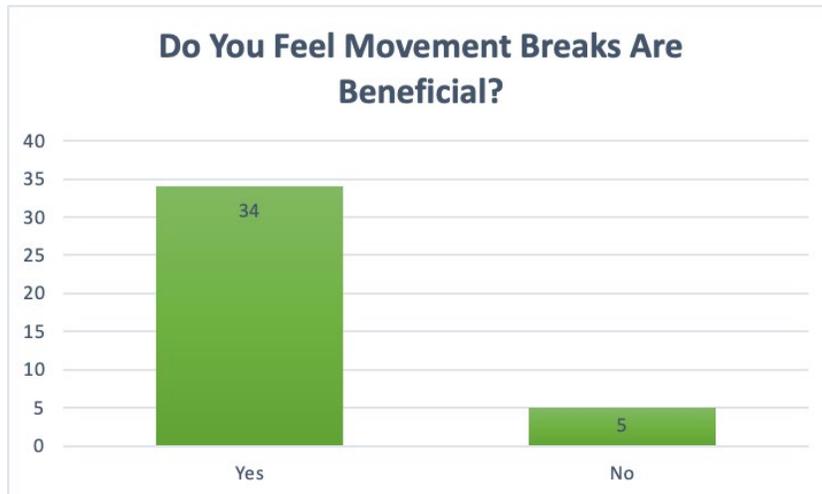
*The best time for movement breaks during class.*



In question 11 the survey asks whether or not participants feel that movement breaks are beneficial. The question collected 39 responses, with 34 participants selecting “Yes”, and 5 selecting “No”. The data collected and presented in Figure 10 would suggest that the majority of participants feel that movement breaks contribute positively to one’s wellbeing.

**Figure 10.**

*Do you feel movement breaks are beneficial?*

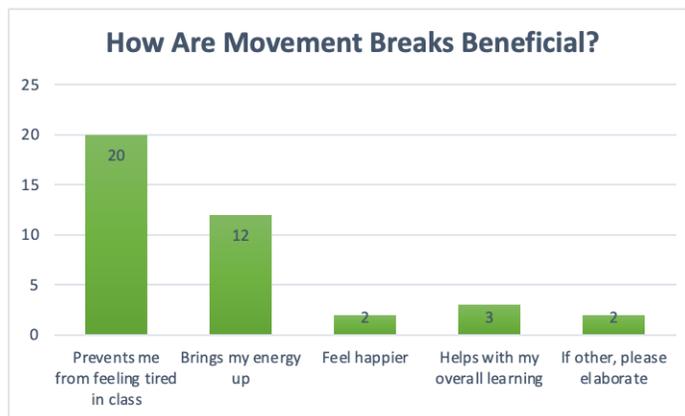


For question 12, we asked the participants how movement breaks were beneficial. Figure 11 illustrates 39 participant responses, with the majority of responses stating that the movement breaks either prevented them from feeling tired during class (20 participants) or that the breaks increased energy levels (12 participants). 3 participants stated that the breaks helped with their overall learning, while 2 stated that they felt happier following the exercises. 2 participants selected “other” as an option, where they were asked to elaborate on their answer. One individual stated that it was important to teach the overall “significance of movement breaks and the effects of being seated for long periods of time”, while the other stated that all of the above answers were applicable for them. The x-axis displays the ways in which movement breaks may be beneficial to participants, while the y-axis shows the amount of responses that each option has collected. The data suggest that the majority of participants feel that movement breaks would be greatly beneficial to keeping them from feeling tired during class while increasing energy levels as well. This is crucial to pushing for movement breaks in class to increase overall engagement. What the data doesn’t account for is at which point during the day do participants have lectures,

as those with morning classes may feel that movement breaks are more warranted than if one has a class in the afternoon.

**Figure 11.**

*How are movement breaks beneficial?*



For question 13, we invited the participants to list any other recommendations or feedback they would want to provide the MOVE U Crew With. This question only garnered 4 responses, ranging in variety. One participant simply stated that they didn't have any feedback to offer. One stated that "There should be movement breaks every hour to keep students' energy up". Another participant wanted the MOVE U Crew to show the potential number of calories that are burned during movement breaks. While the final participant stated their desire for professors to be more involved in the process and facilitated movement breaks for their students "the move u crew into class just for a few minutes of a fit break. Especially classes that are 1.5 hours and more."

### **Discussion**

As previously stated, this study was conducted to assess the movement break initiative offered by the Move U Crew and/or by classroom instructors and to provide recommendations on this service and ways to encourage more physical activity in the classroom. Of the total 40

participants who completed the survey, 5 participants (12.5%) reported to be having injury or mobility issues that impact engagement in physical activity. Of the total 40 participants who completed the survey, 10 (25%) reported previously participating in a movement break at UBC, while the remaining 30 participants (75%) reported that they had not previously participated in movement breaks. Moreover, results show that 60% of the participants are not familiar with the Move U Crew movement break program which indicates that the program needs to be promoted to gain more exposure. 20 participants (51.3%) concluded that movement breaks prevented them from feeling tired in class, which was also studied and supported by Peiris et al., (2021). However, one limitation of this study is that we had a fairly small amount of the student population participating in the study, which would only provide us with limited information. Although we didn't have a large base of data, we feel that we had enough of a sample size to display relevant information from this study. Another limitation is that only certain specific departments such as kinesiology would be familiar with Move U because it was mainly promoted within the kinesiology department, which resulted in less variety. Additionally, a challenge we faced was that we had a short duration of two weeks to collect data, thus explaining the diminutive number of participants in the study.

### **Recommendations**

We have made some recommendations for the MOVE U Crew moving forward. The MOVE U Crew should try to actively facilitate or promote movement breaks for classes as there seems to be a segment of the student population that does not know about the initiative. Increasing awareness and promoting Move U and the movement break initiative to other faculties would also be beneficial, as there are students outside the School of Kinesiology that are unaware of the initiative. Time constraints are one prominent barrier preventing students

from being active. The addition of activities that occur late at night or early in the morning can help students incorporate the activity into their schedules. Additionally, having more virtual programs can also increase student engagement and allows for increased flexibility with time. Providing more drop-in times or access to fitness equipment/activities that students can sign up for based on their availability could help increase engagement, as students report that they would be more likely to participate with Move U if they had increased access to resources.

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# Appendix A



THE UNIVERSITY OF BRITISH COLUMBIA

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## CLASS PROJECT: Health Promotion and Physical Activity (KIN 464)

### Participant Consent Form

[Insert title of your group's project here]  
[insert group number here]

#### Principal Investigator:

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

#### Sessional Instructor:

Dr. Negin Riazi (School of Kinesiology, Faculty of Education)

#### The purpose of the class project:

To evaluate UBC undergraduate student's perception on accessibility to the Move U Movement Break program

#### Study Procedures:

With your permission, we are asking you to participate in an online survey that is only required to be filled out once.

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 survey 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.

## Appendix B



a place of mind  
THE UNIVERSITY OF BRITISH COLUMBIA

### **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 stored on a secure electronic drive by Drs. Riazi and Bundon. 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 is 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 Negin Riazi by email at [negin.riazi@ubc.ca](mailto:negin.riazi@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](mailto: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. By clicking 'Next', you are consenting to participate in the study.

## Appendix C



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### KIN 464: Health Promotion and Physical Activity Class-based Project

**If you are a student who wants to get more active during the school year, we would love to hear from you!**

**As part of a course-based research project (KIN 464), we are conducting a study on how the MOVE U Crew can increase accessibility. If you a current UBC student, ages 18 years old and over, we would love to hear from you/for you to complete a survey. More information [https://ubc.ca1.qualtrics.com/fe/form/SV\\_3OhMt3SrzejDFzg](https://ubc.ca1.qualtrics.com/fe/form/SV_3OhMt3SrzejDFzg) or email Tarandeep Dhillon ([tarandeepdhillon4@gmail.com](mailto:tarandeepdhillon4@gmail.com))**

**Please note that all responses to the survey above will remain anonymous and by completing the survey you will be associated with the study. The Principal Investigator on this project is Dr. Andrea Bundon ([andrea.bundon@ubc.ca](mailto:andrea.bundon@ubc.ca)) and Dr. Negin Riazi ([negin.riazi@ubc.ca](mailto:negin.riazi@ubc.ca)) is the sessional instructor for the course.**

**\*Use they link above or this QR code for easy access to the survey\***

