UBC Social Ecological Economic Development Studies (SEEDS) Sustainability Program

Student Research Report

Identifying Gaps in Recreational Fitness Among Out-of-Province First Year Female Students at UBC Kristina Frkovic, Dhaman Gosal, Ajay Hara, Carly Hess, Gillian Hutton University of British Columbia KIN 464 Themes: Community, Wellbeing

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Executive Summary

In this paper 'Identifying gaps in recreational fitness among out-of-province first year female students at UBC', first year female students living in Orchard Commons were studied to identify barriers that this minority face in accessing recreation programs at the University of British Columbia (UBC). The investigation into this population was important to recognize the effects that transitioning from high school to university had on the health of these students. The magnitude of this transition is affected by whether the student has moved away from home or was previously living in British Columbia. In this period of susceptibility, the university has a direct role in influencing the students balance between health and fitness, social life and academia. Results were collected through a survey which compared students coming from British Columbia to those who have come from outside British Columbia. The survey focused on investigating the effect the transition to university had on physical activity decline through the identification of barriers to physical activity. General trends from the results showed a shift in grades from mostly A's to mostly B's from high school to university in both students from British Columbia and students from outside British Columbia, however out-of-province students reported a greater decline. The majority of students from both groups felt that a lack of physical activity had a negative impact on grades and mental health. The main barriers associated with lack of physical activity for students from British Columbia were a lack of time and a fear of judgment. For students outside of British Columbia, the main barriers identified were, again, a lack of time and also a lack of people to participate with. Results also showed that a large majority of students from both groups that did not currently have a gym membership would purchase a membership, if a women's only gym were to open. Recommendations to increase physical activity levels for first year Orchard Commons Residents from both inside and outside British Columbia include restructuring and introducing new short high intensity classes, holding classes in the Orchard Commons block, female only gyms and framing physical activity as a way to meet new people.

Introduction

Physical activity is one of the primary determinants of health in university and college students. Studies have shown a significant negative relationship between physical activity and perceived stress among students (Nguyen-Michel et al, 2006). Those who partake in regular physical activity have proven to exhibit better concentration and memory during performance of tasks and have also provided evidence for greater academic achievement (Taras, 2005; Trudeau & Shepard, 2008). Moreover, physical activity has been proven to be effective in preventing cardiovascular disease, hypertension, diabetes, obesity and improving mental health (Warburton et al. 2006). The effects of physical activity on health become especially relevant among first year university students who undergo a transition from high school. For most students, the start of university marks a serious socio-emotional adjustment (Larose & Boivin, 1998). During this transition of at least six months, students spend time trying to build a social support network, find comfort and security without their parents and guardians in residence, take on new responsibilities of cooking, cleaning and personal organization (Larose & Boivin, 1998). They must also strive to meet their academic expectations that were more easily achievable/predictable in high school (Compas et al, 1986; Larose & Boivin, 1998). For those who have moved far away from home, these adaptations weigh heavy on the student's balance between health and fitness, social life and academia.

In addition to various determinants of health, there are also determinants of physical activity participation. The determinants of physical activity participation in school populations varies among a wide range of factors that are not only under the control of students themselves, but foremost by the institutions (Tuso, 2015). The determinants of a student's overall fitness and recreation involvement are impacted by how their own identity fits in with the majority of the student population (Tuso, 2015). Students differ from one another in many categories including but not limited to race, ethnicity, gender, distance from home, previous and current extracurricular or sport involvement, major, sociability and living proximity. Each of these factors are what make physical activity on a university campus more accessible to some students compared to others.

Institutions, like the University of British Columbia (UBC), have the responsibility to identify these differences among their student minority groups in order to identify the elements that are serving as barriers to student participation in recreation. Examples of potential barriers could include cost of involvement, discomfort in performing in front of others, lack of time, poor awareness of available activities, no one to attend events with, level of competitiveness, worry about one's ability, distance of travel to activities and/or lack of interest (Allison et al., 1999). UBC Recreation has committed to improving its access to activities by focusing on three topics; gender identity and expression, ability and accessibility, as well as race, culture and ethnic diversity (The University of British Columbia, 2017). However, there are still gaps in what has

been targeted and what has actually shown positive change; not only within UBC Recreation, but also within UBC varsity athletics and through the eyes of the general participating and nonparticipating UBC student body (Bourgeois et al, 2015). For example, UBC students have found a lack of cultural diversity in varsity sports teams and at the administrative level (Bourgeois et al, 2015). Other students have done research to find that woman's motivation for participation in physical activity on campus is hindered by their perception of fun, desire to gain a body type and quality of the facilities available (Christina et al, 2016). Interestingly, more perceived barriers have been reported to exist for females compared to males (Allison et al., 1999).

In order to study these barriers we have chosen to target first year female students residing in Orchard Commons Residence at UBC. We designed a survey that was focused to compare students coming from BC to students coming to university from outside of BC to study whether distance travelled from home and the different adjustments students must make have an effect on their perceived barriers. We compiled results that gave insight to the effects of university on physical activity decline among females, by attempting to identify their barriers to fitness. We further investigated the effects of physical activity on student's academics and mental health. Ultimately these findings have given insight to measures that can be taken at UBC to better the well-being of its community by improving access to recreation for first year females students in Orchard Commons Residence.

Methods

We created a survey that targeted first year, female students living in Orchard commons. Orchard commons houses mainly international and non-BC residents which is the population we aimed to target, as they face numerous and more challenging barriers than those students who live in BC. Some of these barriers include, loss of social support networks, unaware of fitness facilities, living away from family, dealing with university stress along with preparing meals.

We decided to create this survey in order to get a high quantity of responses, while sacrificing the quality of responses. We kept the survey short in order to get the best responses and keep the students engaged throughout the survey in regard to their answers. The survey questions were pertaining to first year life as well as overall wellbeing, academics, physical and mental health. Although the survey enabled us to collect a large sample size we were not able to get high quality responses as were not asking interview like questions, that would have allowed for more self-opinion. This also limited the accuracy and honesty of the responses. We collected data from Orchard commons café, study rooms located in the common building in orchard commons, outside behind the building, as well as posting the survey online on the separate Orchard Commons house Facebook groups. We wanted to get as many people as possible therefore we moved around the building instead of staying in one spot and posted online. Posting online provided a limitation that those who completed the survey were not actually first years, nor were they female. Although we tried to combat that by having written that as a qualification to fill out the survey.

When approaching female students in person, we first asked them questions that allowed us to determine if they were eligible to fill out our survey. These two questions were, if they were residents of Orchard Commons and if they were in first year. If they are qualified, we then proceeded to ask them whether they would fill out a survey we had to do for a research project in KIN 464.

The survey questions looked at several different factors. Firstly, the survey asked whether the female student was from BC, outside of BC, or outside of Canada. We asked this to determine whether there was a difference between those who live in BC and those who are not living in BC. Furthermore, we looked at two main factors of the student's life which were high school life and life attending UBC. We had this division to allow us to be able to compare and contrast results from high school to post-secondary life. Within these divisions we asked how their fitness levels and grades were in high school compared to at UBC. Also, in order to determine how well UBC rec was promoting events and leagues we asked the students whether they had heard of certain UBC rec events. We gave them a list of example events and they either choose yes, they have heard of these events or no, they have not. We also asked if the students were on a current meal plan, this helped us determine if they had further barriers such as, time constraints and further expenses. If the student was on a meal plan, this could mean they have financial constraints but possibly less of a time constraint. On the other hand, if the student was not on a meal plan they would have to cook their food, meaning they had time constraints, but they may have less of a financial burden. Furthermore, we had asked the participants whether or not their grades were affected by a lack of physical activity. We did this in order to assess how important it is for us, as a UBC community, to initiate new activities and promote new events. Also, we asked whether or not a lack of physical activity had an effect on the participants mental health and grades. One of the most important questions we asked the female participants was the type of barrier they face with their participation in physical activity. This is important since it allows us to understand what the main barriers are in order to address them and try to find various solutions. The last question we asked was whether or not the participants would purchase a membership for a women's gym. The simple idea behind this question was whether or not the participants felt comfortable in an environment with both males and females, this would help us determine if there was a need for a women's gym, or a specific time for women only at the gym. Overall, we collected 51 samples of females in first year from Orchard Commons. We then collected the data and began to organize it based on those that lived outside of BC and those that lived in BC. When we created our graphs, we used percentages instead of total number of people that completed the survey in order to get accurate values to compare and contrast. Also, all of the graphs we made were comparing the results from those outside of BC and those within BC. We graphed average high school grades compared to average grades in first year at UBC.

Furthermore, we graphed the different barriers that were faced between those participants who were outside of BC and those were lived inside BC. We also graphed what percent of participants had heard of UBC's free week, as well as what percent of participants knew of and/or participated in UBC rec events. As well, we graphed what facilities were used, by again comparing between those within BC and those outside of BC. Lastly, we graphed if participants would, would not or possibly would purchase a women's only gym membership.

Results

Analysis was done on responses from 51 first year, female Orchard Commons residents. Responses from students from BC (n=19) were compared against those of students who came to UBC from outside of BC (n=32). In order to normalize the data from each group so that comparison could be made on the same graph, responses were tallied and converted to percentages of total responses. Percentages are compared within each response group. We observed both sets of students to have mostly A's prior to entering university (Figure 1). Students from BC were on average scoring slightly higher than those from within BC. When comparing the student's grades against their first year grades at UBC, both sets of students went from scoring mostly A's to mostly B's (Figure 2). A few students from BC also reported scoring A's, C's and F's, whereas a lot of those from outside of the province also reported scoring C's and some D's. We asked students to report on how they thought physical activity was impacting their grades (Figure 3). The majority of students from both in and outside of BC reported that a lack of physical activity was having a negative impact on their grades. Between 10 and 30% responded that it either had a positive impact, had no impact, or that they did not experience a lack of physical activity for it to have any affect. Similarly, we asked whether or not a lack of physical activity was having a negative impact on student's mental health (Figure 4). Majority of student from inside and outside of BC responded that, yes, it was. However, this negative impact on mental health appears to be affecting students from inside BC more (74%) than those who have come to UBC from outside the province (61%). Moreover, we asked students what their perceived barriers to physical activity at first year females residing in Orchard Commons are (Figure 5). Results were very similar between both sets of students, with 40% and 32% of respondents from inside and outside of BC, respectively, expressing that a lack of time was their biggest barrier to physical activity. For those from BC, this was followed by a fear of judgement, no transportation, facilities being too far away, no one to participate with, facilities being too expensive and not having any interest in going. For those from outside of BC, no time was followed by no one to participate with, fear of judgement, no transportation, facilities being too expensive, facilities being too far and not having any interest.

In comparing student awareness and participation in UBC Recreation's events and/or leagues, we found trends among both groups of students from inside and outside of BC, in that majority have been aware but did not participate, followed by being aware and participating

(Figure 6). Both of these responses were slightly greater from students coming from outside of BC. Of those responding from BC, 17% were not aware of UBC Recreation's events compared to 13% from those responding from outside of BC. A similar question was asked to gather information on participation in UBC Recreation's "Free Week" events (Figure 7). Of the students from BC, only 5% responded that they had participated, compared to 90% who responded that they did not participated but had wanted to, and another 5% who responded that they did not participated, compared to 52% who responded that they had participating. Of the students from outside of BC, 26% responded that they had participate and had no interest in participate in participating.

In comparison of facility use across campus, we observed equal use (4%) of the Orchard Commons Residence Gym from students from inside and outside of BC (Figure 8). 35% and 24% of students from inside and outside of BC respectively responded to using the Student Recreation Centre (SRC) and the Birdcoop Fitness Centre. Both the Aquatic Centre and the Doug Mitchell Thunderbird Sports Centre had a higher percentage of student from outside the province respond using the facility. Use of the tennis bubble (5%) was only reported by students from outside of BC.

Furthermore, of the respondents from each group of students, 89% of those from inside BC and 97% of students from outside of BC responded that they were on a meal plan (Figure 9). We next asked student if they would purchase a "women's only" gym membership if one were offered (Figure 10). Of the students responding from each group 45% of those from inside BC and 23% of those from outside of BC responded "yes". Of those responding from outside of BC, more would "maybe" consider buying one than not consider it at all.

Lastly, we compared the common activity types that these students participated in prior to coming to UBC and over their past year at UBC. Participation was tallied rather than converted to percentages because Among respondents from BC, the most popular participation type was as a sports team member with 17 individuals taking part in high school (Figure 11). This dropped to only 4 individuals participating in first year of university. The second most popular activity was doing an "at home workout" such as running. Of the respondents, the same number of individuals (14) participated in university as did in high school. There were 2 responders who went from participating in an activity type in high school to having no participation in university. Nonetheless, of the respondents from outside of BC, an "at home workout" was most popular with 23 respondents showing participation in high school (Figure 12). This number decreased to 18 in first year. Similar to the results from those who were from BC, there was an increase from 1 to 4 responses to non participation. Ultimately, both Figures shows a trend of decreasing participation across activity types from students who cam to UBC from inside and outside of the province.

Discussion

Our goal of this study was to analyze our survey results and determine the gaps and barriers in physical activity levels of first year female UBC students living in Orchard Commons, to provide ideas for UBC Athletics & Recreation to "close" these gaps. In our study, we examined two different groups of females living in Orchard Commons: those from British Columbia and those from outside of British Columbia. Despite there being some differences regarding the physical activity levels when comparing these two groups, both groups shared many common trends.

With regards to academic standing, there was a significant decrease in self-reported letter grades when transitioning from high school to UBC in both groups. Figure 3 shows that about half of both BC residents and non-BC residents believed that a lack of physical activity has had a negative impact on their grades. Furthermore, Figure 4 shows that 74% of the BC residents and 61% of the outside-of-province residents reported that a lack of physical activity has had a negative impact on their mental health. Studies have shown increased levels of stress amongst university students was mainly attributed to lower than expected grades (Bedewy & Gabriel, 2015) and research has shown that physical activity could positively impact both their mental health and their academic achievement (Coe, Pivarnik, Womack, Reeves & Malina, 2006). These two statistics suggest that a lack of physical activity is negatively impacting a first-year female Orchard Commons residents' overall university experience.

Furthermore, both groups reported a significant decrease in all but one (at home workouts/running outside) form of physical activity since attending UBC, especially in sport teams' participation. The most reported barrier to physical activity from both groups was a lack of time (Figure 5). Research has shown that students spend a significant amount of time studying to improve academic achievement, which otherwise could have been spent being physically active (Deliens, Deforche, De Bourdeaudhuij, & Clarys, 2015). Educating students about the academic benefits of being physically active could be a solution to overcoming this barrier. A barrier that affected non-BC residents over twice as much as BC residents (18.5% to 9%) was a lack of individuals to participate in physical activity with. This is important as people are more likely to participate in physical activity with friends and when they view it as a social event (Schneider & Kummert, 2016). Framing physical activity in a way that promotes meeting new people could potentially be a way to attract more individuals to participate.

Overall, it seemed that most students were aware of the events and leagues that UBC Athletics & Recreation had to offer. However, about half of those surveyed from both groups residents did not participate in any of them (Figure 6). Additionally, almost all of the BC residents and about half of the non-BC residents reported that they did not participate in UBC

Recreation's Free Week, but that they had wanted to (see Figure 7), which could potentially be attributed to the previously mentioned barriers (lack of time and people to participate with). This suggests that UBC Athletics & Recreation is doing a good job of implementing their health promoting activities, but that their objective of getting students to participate in them is lacking.

The Birdcoop and the Student Recreation Centre were the most frequented recreation facilities for BC residents, (both approximately 35%), whereas the out-of-province students most frequented facility was the Aquatic Centre (27%). In addition, non-BC residents participated in dance during high school almost twice as much (9% to 5%) in comparison to BC residents. This displays a difference in the type of physical activity that these individuals would be most likely to participate in, suggesting that the best way to reach the non-BC resident students would be through aquatic and dance-based activities.

Some challenges that we faced while conducting this study were possible dishonesty and irrelevant or duplicated data. The accuracy of responses plays a large part in the validity of our results and findings (Horn, Feng, Li, Pesce, 2001). The accuracy of the answers is dependent on the honesty of the participant and their ability to know the answers to the questions. To reduce and possibly eliminate dishonest answers the survey was made anonymous, but there was still no certain way for us to determine if the answers were 100% honest. Furthermore, students often filled out the survey questions. Due to the survey being posted on various social media platforms, it could have been quite possible that someone who dismissed the criteria and did not fit our description filled out the survey anyways, which would skew our results. Along similar lines, participants may have filled out the survey more than once, and we would have no way of knowing, which once again could skew our results.

A limitation of our study was having a small sample size. Having a greater number of participants would aid in improving the validity of our results through a larger sample size. A larger sample size is a better representative of the population, limiting the influence of outliers or extreme observations (Horn, Feng, Li, Pesce, 2001). For future research, a draw where one participant receives some sort of incentive/prize might influence the number of participants that fill out the survey. Another limitation is that we mainly targeted students eating in the cafeteria around dinnertime so there could be extraneous variables that skewed our results, such as the personalities of people that eat in the cafeteria, the time that people eat, the fact that people who work out may eat more (or less), etc. Another limitation was that the individuals who administered the surveys were students, which limited the amount of time they are available to collect data.

The most reported barrier to participation in physical activity in both of our groups was a lack of time, which is something many post-secondary students often face (Deliens, Deforche,

De Bourdeaudhuij, & Clarys, 2015). Promoting physical activity in such a way that frames it to improve academic attainment could be a way to combat this barrier in the entire student population. The findings from this research suggest that some of the issues that first year female UBC students living in Orchard Commons face stem from social isolation, as their second largest barrier to physical activity was a lack of people to participate with. This is something that not only affects female students, as many male out-of-province students face similar barriers (Wu, Garza & Guzman, 2015). Building social connections through physical activity could be a way to overcome this barrier for many groups.

Ultimately, little difference was observed between the perceived barriers of students from the province and from out-of-the-province. Nonetheless the study provided valuable evidence and insight towards (1) an existance of a decline in physical activity among this female population coming from high school, (2) a negative effect on this population's health and grades during their first year of university, (3) the existing barriers these females are facing that should be targeted in the near future, and (4), potential recommendations and steps forward that can be taken to minimize these barriers for students of this population.

Recommendations

Recommendations to increase physical activity levels for first year female Orchard Commons Residents from both within and outside BC include introducing new short high intensity interval (HIIT) classes, holding classes in the Orchard Commons gym, and implementing female only gyms or female-only sections of pre-existing gyms. As our study identified that the majority of students believed that a lack of physical activity had a negative impact on their grades as well as mental health, exercised focused interventions were the basis for recommendations.

The most reported barrier of having no time to participate in physical activity could be overcome through 30-minute HIIT classes, which can be equally as beneficial for students health in a shorter amount of time. Time could also be reduced further through holding exercise classes at the residence. This links in with eliminating transportation as a barrier which is important as 11.4% of students from inside and 12.3% of students from outside BC identified transport as a barrier for exercise (Figure 5).

To reverse the dramatic decrease of students participating in sports teams specifically since high school, implementing residence or house-based teams in intramural leagues might encourage residents to participate by helping to alleviate the barrier of having no one to participate in physical activity with. Furthermore, increasing promotion for intramural leagues in residents made up of primarily international students could foster a social network amongst these students. The introduction of female only gyms or female-only sections to gyms could help to eliminate fear of judgment. This has been recommended as 45.5%% of the BC residents and 23.1% of non-BC residents who do not currently own a gym membership, said they would purchase a membership if a woman's only gym opened (27.3% of the BC residents and 45.2% of non-BC residents said maybe) (Figure 10).

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Appendices

Survey:

4/1/2018

KIN 464 Gaps in Recreation

KIN 464 Gaps in Recreation

First year female students living in Orchard Commons

Skip to question 1.

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THE UNIVERSITY OF BRITISH COLUMBIA

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KIN 464: Health Promotion and Physical Activity

Participant Consent Form for Class-based Projects

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

Student Group: 22 Dhaman Gosal Gillian Hutton Carly Hess Kristina <u>Erkovic</u> Ajay Hara

The purpose of the class project:

To gather knowledge and expertise from community members on topics related to physical activity, recreation, health promotion and/or active transportation.

Study Procedures:

With your permission, we are asking you to participate in a survey. Students will record the surveys and take note of your responses. With the information gathered, students will critically examine how different individuals understand or engage in health promoting activities or initiatives.

Project outcomes:

The information gathered will be part of a written report for the class project. The written report will be shared with the community partners involved with the project. Summaries of findings may also posted on the following website.

UBC SEEDS Program Library:

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

No personal information/information that could identify participants will be included in these reports.

https://docs.google.com/forms/d/1jMgz0ZqN_p4FtFLrmlbiueeoCW21Y4AA_HJTx5HBAoM/edit?ts=5aaffe40

4/1/2018

KIN 464 Gaps in Recreation

Potential benefits of class project:

There are no explicit benefits to you by taking part in this class project. However, participating 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 is paramount, and no names will be used in the reports.

At the completion of the course, all data (i.e. notes, interview transcripts) and signed consent forms will be kept in a locked filing cabinet in Dr. Andrea <u>Bundon's</u> 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. Although there is a schedule of questions, participants are free to share what they would like, including refusing to answer specific questions. You should know that your participation is completely voluntary and you are free to withdraw from the survey 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. gr 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 filling out the survey you indicate that you have received a copy of this consent form for your own records.

1. Do you agree to the terms and conditions listed above in the Participant Consent Form? Check all that apply.

I agree

2. Where are you from?

Check all that apply.

- British Columbia
- Canada, not British Columbia
- Outside of Canada

4/1/2018	KIN 464 Gaps in Recreation
	3. What faculty are you in?
	Check all that apply
	Arts
	Commerce
	Engineering
	Forestry
	Science
	Land and Food Systems
	Kinesiology
	4. Major (if applicable):
	Prior to coming to UBC which of the following activities did you participate in? Check all that apply.
	Sports teams
	Martial arts
	Yoga/Pilates
	Gym membership
	At home workouts/running outside
	None of the above
	Other.
	6. On average, what were your grades in high school?
	Check all that apply.
	Mostly A's
	Mostly B's
	Mostly C's
	Mostly D's
	Mostly F's
	Other:

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4/1/2018	KIN 464 Gaps in Recreation
	 Since attending UBC, which activities have you continued or started to participate in? Check all that apply
	Sports teams
	Martial arts
	Dance
	Yoga/Pilates
	Gym membership
	At home workouts/running outside
	None of the above
	Other:
	8. Are you aware of the various events and leagues that UBC Recreation has to offer? (le. Storm the Wall, Day of the Longboat, Lace up for Kids, Nitobe Basketball League, Cross Volleyball League, etc.) Check all that apply.
	Yes
	Νο
	9. Have you participated in any of UBC Recreation's events or leagues? Check all that apply. Yes No
	10. If yes, which ones?
	11. Have you participated in any of UBC Recreation's Free Weeks? Check all that apply.
	Yes
	No, but I wanted to
	No, and I didn't want to
	12. Of the following, which UBC facilities have you visited for recreational use? Check all that apply.
	Student Recreation Centre (SRC)
	Birdcoop Fitness Centre
	Aquatic Centre
	Doug Mitchell Thunderbird Sports Centre (Arena)
	Tennis Bubble
	Other:

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1/2018	KIN 464 Gaps in Recreation
	13. Are you on a meal plan?
	Check all that apply.
	Yes
	Νο
	14. Of the following, which apply to you? Check all that apply.
	I work a part-time job
	I have joined a UBC Club
	I have joined a UBC Varsity sports team or a UBC Thunderbird Sports Club
	15. On average, what are your grades at UBC?
	Check all that apply
	Mostly A's
	Mostly B's
	Mostly C's
	Mostly D's
	Mostly F's
	16. Do you think that a lack of physical activity has had an impact on your grades? Check all that apply.
	Yes, a negative impact (lower grades) Yes, a positive impact (higher grades)
	I do not have a lack of physical activity
	17. Has a lack of physical activity had a negative impact on your mental health?
	Check all that apply.
	Yes
	No
	Maybe

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4/1/2018	KIN 464 Gaps in Recreation
	18. Which of the following do you consider to be barriers to your lack of physical activity? Check all that apply.
	 No time Too expensive No interest No one to participate in physical activity with No transportation, facilities too far Fear of judgement while participating in physical activity
	I haven't experienced a lack of physical activity Other:
	19. If you currently do not own a gym membership and a "women's only" gym opened, would you purchase a membership? Check all that apply.
	Yes No Maybe
	I currently own a gym membership

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Figure 1. Representation of of average reported high school grades of first year female Orchard residents at UBC. Responses are compared between students who are from BC and those who are from outside of BC.



Figure 2. Representation of of average reported first year university grades of first year female Orchard residents at UBC. Responses are compared between students who are from BC and those who are from outside of BC.



Does lack of physical activity have an impact on grades?





Has a lack of physical activity had a negative impact on your mental health?

Figure 4. Representation of first year female Orchard resident's opinions regarding the impact of a lack of physical activity on their health. Responses are compared between students who are from BC and those who are from outside of BC.



What are barriers to your lack of physical activity?

Figure 5. Representation of first year female Orchard resident's opinions regarding their perceived barriers to a lack of physical activity. Responses are compared between students who are from BC and those who are from outside of BC.



Participation in UBC Recreation's events or leagues

Figure 6. Representation of first year female Orchard resident's awareness and participation in UBC Recreation's events and leagues. Responses are compared between students who are from BC and those who are from outside of BC.



Figure 7. Representation of first year female Orchard resident's participation and desire to participate in UBC Recreation's 'Free Weeks'. Responses are compared between students who are from BC and those who are from outside of BC.



Which UBC facilities do you use for recreation?

Figure 8. Representation of first year female Orchard resident's use of UBC facilities for recreation. Responses are compared between students who are from BC and those who are from outside of BC.



Figure 9. Representation of the number of first year female Orchard resident respondents who are on a meal plan. Responses are compared between students who are from BC and those who are from outside of BC.



Would you purchase a "women's only" gym membership

Figure 10. Representation of first year female Orchard resident's likelihood of purchasing a "women's only" gym membership if it were offered. Responses are compared between students who are from BC and those who are from outside of BC.



Figure 11. Representation of first year female Orchard resident's activity-type participation prior to coming to UBC (in high school) and in their first year of UBC. All data represented is from students who are from BC.



Activity-type participation of students from outside of BC

Figure 12. Representation of first year female Orchard resident's activity-type participation prior to coming to UBC (in high school) and in their first year of UBC. All data represented is from students who are from outside of BC.