# UBC Social Ecological Economic Development Studies (SEEDS) Sustainability Program <br> Student Research Report 

Barriers of Women's Participation in Intramurals Rogan Cheng, Jacob Cho, Chris Madill, Katie Ng, Suzanne Zhen<br>University of British Columbia<br>KIN 464<br>Themes: Health, Community, Wellbeing<br>Date: Apr 2, 2020

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Barriers of Women's Participation in Intramurals
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## Executive Summary

Although there are many positive benefits in participating in intramural sports, there seems to be a lack of participation and commitment for women in comparison to men. Exploring women's opinions and feelings towards intramural sports may help us to understand what certain barriers may restrict their participation and factors that may increase their participation. Therefore, the purpose of this research was to investigate the barriers of women's participation in intramurals, specifically third and fourth-year female students at the University of British Columbia (UBC). Men were included in the research to determine any significant differences between the two genders. Through an online survey, data was collected from 57 participants including 38 women, 17 men and 2 who preferred not to answer. The survey consisted of a Likert Scale based upon their opinions on intramurals, as well as including open-ended questions for any participants that wanted to provide their feedback. Results showed that the participants acknowledged the health benefits that intramurals sport offer. However, barriers such as social support, competency, time constraints, and promotional awareness seem to be the most effective in their participation. To our surprise, a new barrier has been discovered within our research that the mode of transportation also contributed to their decision of joining intramural sports. Furthermore, it appears that the number of women or men within an intramural team did not have a significant impact on influencing women's choice of participating. From our open-ended questions, participants provided recommendations on how to increase the participation of women in intramurals. There were a few that suggested there should be more effective promotion strategies to the student population, especially to the female students. Additionally, implementing a fix-hour within certain days of the week for students or even providing prizes for those who participate in intramurals could be beneficial in increasing the rates of women participating. Moving forward, further research should focus primarily on women, as well as expanding the sample size to get more variety of opinions, answers, and suggestions. Considering that there are many international students and students from other institutions that transfer to UBC in their third and fourth years, these should be examined in further research to gain a better understanding if transferring to a new institution can be a potential barrier. The exploration of the barriers and motivation of participants at UBC who took part in this study will help in future research and increase knowledge around women's participation in intramural sports and expand programming resources to help create new recreation programs. With these suggestions, this could help to find different avenues to increase women's participation in intramurals in the future for UBC and other institutions.

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## Introduction \& Literature Review

Through the University of British Columbia's (UBC) SEED's initiative, there has been an ongoing trend in the decline of women's participation in intramurals at UBC. Our aim for this project is to explore the reasoning behind this decline in specifically third year and fourth year female students at UBC. We tend to determine the barriers that impede their participation in intramurals, look for ways in which we can introduce opportunities to enhance participation or reduce potential barriers, and increase women's participation based on our research and help UBC's Athletics and Recreation to understand why participation is declining. In the development of this project to increase women participation in intramurals, we will be considerate of the three health promotion strategies of the Ottawa Charter of 1986; enable, mediate, and advocate (The World Health Organization, 1986, p 1). We begin by examining various articles to identify potential barriers that hinder women's participation in intramurals and the benefits as well. This will allow us to build upon current research and improve methods to further reduce barriers to participation.

Intramural sport has always been a popular activity within the university environment. Most people join intramurals for an extracurricular activity that is enjoyable. Although intramurals are very popular, most people do not understand that it is one of the most beneficial activities to increase social aspects and improve healthy practices (Artinger, Clapham, Hunt, Meigs, Milord, Sampson, \& Forrester, 2006). Therefore, recreational professionals need to promote intramurals as having major health benefits.

Randomly selected students completed a survey that asked questions about how they felt intramurals benefited their social wellbeing (Artinger et al., 2006). There were five categories

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that students were evaluated on including university integration, personal social benefits, cultural social benefits, social group bonding, and reliable alliance benefits (Artinger et al., 2006). There was an increase in many different aspects, such as commitment to peers, community involvement, ability to work within a team, and social bonding (Artinger et al., 2006). These factors may be beneficial to women because social relationships that develop from socialization is seen as a great motivational factor regarding choice and participation in certain activities for women (Baghurst, Tapps \& Judy, 2014). However, the stigma of participation in sport being seen as "unfeminine" may also be a hindrance. If women can gain social support and feel a sense of connectedness to those around them, it may help break that stigma (Baghurst et al., 2014). Women also tend to enjoy the sport more when there is a social atmosphere where they can engage with their friends (Titlebaum, Wallace \& Whaley, 2012). Additionally, first year students seemed to have higher benefits in the categories compared to fourth year students (Artinger et al., 2006). The reason may be that fourth-year students have had more social experiences outside of freshmen activities, in which they believe that intramurals may not have as much benefit to them (Artinger et al., 2006).

However, Baghurst et al. (2014), found that there are various constraints that influence women participation such as perceived gender roles, body image, and cultural expectations. These may also play a role in a women's commitment to sport and leisure activities. In order to determine women college participants' commitment to an intramural sport, Baghurst and colleagues (2014) conducted a study comparing women who participated in an all-female intramural league and women in a co-recreational league for basketball. Seven factors of the Sport Commitment Model were used to measure how motivated an individual was to keep playing a sport and these include: Sport Commitment, Sport Enjoyment, Personal Investments,

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Social Constraints, Involvement Opportunities, Social Support, and Involvement Alternative (Baghurst et al., 2014). Results showed that the most significant factors contributing to women's participation were Sport Enjoyment, Social Support, and Involvement Opportunities (Baghurst et al., 2014). Both groups displayed similar motivation towards their participation in intramurals, but commitment differs more in the all-female league. Findings suggest that this difference may be due to the number of women needed for team participation (Baghurst et al., 2014). For example, the co-recreational league only needs a minimum of two women, while the all-female league needs five to play each week.

Additionally, a survey was given to sports directors at multiple universities and it was reported that roughly less than 20 percent of women participated in intramural sports (Titlebaum, Wallace \& Whaley, 2012). A reason for fewer women participation consists of women choosing "volleyball over other popular male-dominant sports like basketball and flag-football." Also, some students state that they lack the time to participate, and others have reported that the skill level and fitness involvement is either too high or too low (Titlebaum et al., 2012). McGinley, Rospenda, Liu, and Richman (2016) suggested some changes that can be made and Titlebaum, Wallace and Whaley (2012) had proposed some more. These include rule changes, added educational components that increased knowledge around certain sports and sport-specific skills and sports clinics (Titlebaum et al., 2012). All these changes created an inclusive and social environment where everyone was able to connect with each other while achieving a quality workout (Titlebaum et al., 2012).

McGinley et al. (2016) looked into the relationship between participation in college activities and the experiences of different types of harassment. Extracurricular activities can be seen as a way to develop interpersonal skills, intrapersonal benefits, and self-esteem for students

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(McGinley et al., 2016). However, they can also be detrimental as they can increase the likelihood of substance abuse, alcohol abuse, and the risk of harassment (McGinley et al., 2016). A survey was used to collect data from a sample of 1852 freshmen (1085 females) regarding exposure to any sexual, or generalized harassment in any of the extracurricular activities that they participate (McGinley et al., 2016). The results showed that women who participate in intramural sports were found to be highly exposed to sexual generalized harassment, whereas it showed no correlation for men (McGinley et al., 2016). Sports participation has been seen as a "masculine" activity historically, meaning that the harassment that women are experiencing could be coming from social stigma from participating (McGinley et al., 2016). To resolve this problem, intramural teams can be broken into different categories; men, women, and co-ed. This will offer women different options when joining an intramural team which can potentially relieve them from harassment and stress. Also, intramural sports were predicted to have increased alcohol use, but seem to be negatively related to psychological distress for men (McGinley et al., 2016).

McGinley et al. (2016) also suggested that women are prone to an increased risk of bullying and victimization in intramural sports. A few reasons that women are becoming victims in intramural sports could be that they do not possess the social status to intercollegiate athletes and that the activities are not being supervised by adults or other school figures (McGinley et al., 2016). It would seem that intercollegiate sports are a protective factor against harassing experiences since it requires professional supervision such as a referee to look after the games. Since intramural sports participation is not mandatory for students, it will become less competitive and be taken less seriously, forcing it to become more recreational (McGinley et al., 2016). With the presence of harassment and gender norm in intramural sports, it is expected for

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women to participate less. Introducing a supervision program such as referees to help look after any potential harassment that may occur, as well as creating options to join a co-ed team or a gender specific team will help prevent problems that may arise and even increase participation in females drastically (McGinley et al., 2016).

Women participation in intramural sports continues to be an area of interest as the participation rates remain lower in comparison to men participation. Through our findings, social support, social relationships, skill level, and the number of men and women in an intramural team can impact women's interest in participating in intramural sports (Baghurst et al., 2014; McGinley et al., 2016; Titlebaum et al., 2012). In exploring these factors that contribute to women's participation, research will be conducted within the University of British Columbia to determine whether these apply and to look further into other reasons that may have not been examined. This evolves into a potential research question; what type of benefits of participating in intramural sports do upper year female students' value if not socially? In hindsight, there should be more promotion on the social and gender specific aspects of participating in not only physical activity, but also in intramural sports.

## Methods

For our research, we discovered many aspects that contributed to the decline in women's participation in intramural sports. We explored female university students in year 3 and 4 to be part of our study. Specifically, we looked at students from the University of British Columbia for a local analysis. According to Titlebaum, Wallace \& Whaley (2012), students in year 3 and 4 make up most of the population of the school and often lack time for physical activities due to being caught up in the increasing workload. Additionally, third and fourth year students would consider their physical activities more outside of school rather than playing for an intramural

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team (Artinger et al., 2006). Taking a quantitative approach, we developed an online survey that was distributed to our target population, which was females, as well as male students to consider whether the examined variables would have a different impact on both populations. We chose a survey for our quantitative approach because it was easier to generate the amount of results from the population and for them to access, whereas other methods would not be that effective in doing so. The survey included a Likert scale with responses ranging from 1 to 5; 1 being strongly disagree and 5 being strongly agree. Questions within the survey were based on barriers and variables that may affect the participation in intramural sport of women. A total of 10 questions were asked using the Likert scale, as well as 2 written response questions. Questions were built on each other and by having specific questions we were able to direct our research accordingly. The written responses allowed us to learn more about the variety of participants that we were dealing with and what kinds of perceptions and experiences they have with intramural sports. Examples such as social support, social relationships, skill level, and the number of men and women on an intramural team were being considered in the survey. In order to recruit participants, a website link to the survey was shared among multiple social media platforms such as Facebook, Twitter, and Instagram. These social media platforms are commonly used among the student population (Arora et al., 2019). However, to consider the participants' privacy, we ensured their opinions and answers remained anonymous. As for the data collected, it was analyzed with UBC's Qualtrics Survey Solutions, where it indicated the amount of people who completed the survey. In total, we received 61 respondents, but after reviewing to ensure all surveys were fully completed, 4 were excluded from the sum. This led us to a total of 57 respondents including 38 women, 17 men and 2 who preferred not to answer. With the data

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from the surveys, we calculated the number of participants' input for the answers to come up with the common answer to the question.

## Results and Findings

The following demographic information was collected within our survey by questions one to five. $66.67 \%$ of respondents were females ( $\mathrm{n}=38$ ) and $29.82 \%$ of respondents were male $(\mathrm{n}=17)$ and $3.51 \%$ respondents preferred not to answer $(\mathrm{n}=2)$. The distribution of year in school was majority 66.67 fourth year students $(\mathrm{n}=38)$ while $33.33 \%$ was third year students $(\mathrm{n}=19)$. For both third and fourth year students who were asked if they currently participate in intramural or recreational activities, $43.86 \%$ said yes $(\mathrm{n}=25)$ and $56.14 \%$ said no ( $\mathrm{n}=32$ ). A majority of respondents said they lived off campus at $84.21 \%(n=48)$ while only $15.79 \%(n=9)$ said they lived on campus. The majority of respondents answered that their main mode of transportation was by bus at $57.89 \%(n=33)$, following by car at $33.33 \%(n=19)$, by walking at $5.26 \%(n=3)$ and finally by bike at $3.51 \%(n=2)$.

| $\begin{array}{l}\text { Table 1: } \\ \text { Likert Scale Question Results }\end{array}$ |  |  |  |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Question \# | $\begin{array}{c}\text { Strongly } \\ \text { disagree }\end{array}$ | Disagree | $\begin{array}{c}\text { Somewhat } \\ \text { disagree }\end{array}$ | $\begin{array}{c}\text { Neither } \\ \text { agree or } \\ \text { disagree }\end{array}$ | $\begin{array}{c}\text { Somewhat } \\ \text { agree }\end{array}$ | Agree | $\begin{array}{c}\text { Strongly } \\ \text { Agree }\end{array}$ |
| $\begin{array}{l}\text { Q.6 } \\ \text { Workload restricts } \\ \text { participation }\end{array}$ | $\begin{array}{c}1.75 \% \\ (\mathrm{n}=1)\end{array}$ | $\begin{array}{c}12.28 \% \\ (\mathrm{n}=7)\end{array}$ | $\begin{array}{c}12.28 \% \\ (\mathrm{n}=7)\end{array}$ | $1.75 \%(\mathrm{n}=1)$ | $\begin{array}{c}33.33 \% \\ (\mathrm{n}=19)\end{array}$ | $\begin{array}{c}21.05 \% \\ (\mathrm{n}=12)\end{array}$ | $\begin{array}{c}17.54 \% \\ (\mathrm{n}=10)\end{array}$ |
| $\begin{array}{l}\text { Q.7 } \\ \text { Likelihood to } \\ \text { participate if } \\ \text { friends joined }\end{array}$ | $\begin{array}{c}1.75 \% \\ (\mathrm{n}=1)\end{array}$ | $\begin{array}{c}5.26 \% \\ (\mathrm{n}=3)\end{array}$ | $\begin{array}{c}3.51 \% \\ (\mathrm{n}=2)\end{array}$ | $7.02 \%(\mathrm{n}=4)$ | $26.32 \%$ |  |  |
| $(\mathrm{n}=15)$ |  |  |  |  |  |  |  |\(\left.] \begin{array}{c}47.37 \% <br>

(\mathrm{n}=27)\end{array} $$
\begin{array}{c}8.77 \% \\
(\mathrm{n}=5)\end{array}
$$\right]\)

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| Q. 8 <br> Intramurals helps relieve stress and anxiety | $\begin{gathered} 0 \% \\ (\mathrm{n}=0) \end{gathered}$ | $\begin{gathered} 0 \% \\ (\mathrm{n}=0) \end{gathered}$ | $\begin{gathered} 0 \% \\ (\mathrm{n}=0) \end{gathered}$ | $\begin{gathered} 21.05 \% \\ (\mathrm{n}=12) \end{gathered}$ | $\begin{gathered} 28.07 \% \\ (\mathrm{n}=16) \end{gathered}$ | $\begin{gathered} 38.60 \% \\ (\mathrm{n}=22) \end{gathered}$ | $\begin{gathered} 12.28 \% \\ (\mathrm{n}=7) \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Q. 9 <br> Likelihood to participate in sports with more males | $\begin{gathered} 3.51 \% \\ (\mathrm{n}=2) \end{gathered}$ | $\begin{gathered} 3.51 \% \\ (\mathrm{n}=2) \end{gathered}$ | $\begin{gathered} 21.05 \% \\ (\mathrm{n}=12) \end{gathered}$ | $\begin{gathered} 38.60 \% \\ (\mathrm{n}=22) \end{gathered}$ | $\begin{gathered} 19.30 \% \\ (\mathrm{n}=11) \end{gathered}$ | $\begin{gathered} 12.28 \% \\ (\mathrm{n}=7) \end{gathered}$ | $\begin{gathered} 1.75 \% \\ (\mathrm{n}=1) \end{gathered}$ |
| Q. 10 <br> Likelihood to participate in sports with more females | $\begin{gathered} 1.75 \% \\ (\mathrm{n}=1) \end{gathered}$ | $\begin{gathered} 5.26 \% \\ (\mathrm{n}=3) \end{gathered}$ | $\begin{gathered} 10.53 \% \\ (\mathrm{n}=6) \end{gathered}$ | $\begin{gathered} 36.84 \% \\ (\mathrm{n}=21) \end{gathered}$ | $\begin{gathered} 33.33 \% \\ (\mathrm{n}=19) \end{gathered}$ | $\begin{gathered} 8.77 \% \\ (\mathrm{n}=5) \end{gathered}$ | $\begin{gathered} 3.51 \% \\ (\mathrm{n}=2) \end{gathered}$ |
| Q. 11 Believe they lack skill despite the different levels offered | $\begin{gathered} 19.30 \% \\ (\mathrm{n}=11) \end{gathered}$ | $\begin{gathered} 17.54 \% \\ (\mathrm{n}=10) \end{gathered}$ | $\begin{aligned} & 7.02 \% \\ & (\mathrm{n}=4) \end{aligned}$ | $\begin{gathered} 8.77 \% \\ (\mathrm{n}=5) \end{gathered}$ | $\begin{gathered} 21.05 \% \\ (\mathrm{n}=12) \end{gathered}$ | $\begin{gathered} 15.79 \% \\ (\mathrm{n}=9) \end{gathered}$ | $\begin{gathered} 10.53 \% \\ (\mathrm{n}=6) \end{gathered}$ |
| Q. 12 Enjoy playing sports where they do not have to worry about playing in a team setting and focus on themselves | $\begin{gathered} 0.00 \% \\ (\mathrm{n}=0) \end{gathered}$ | $\begin{gathered} 21.05 \% \\ (\mathrm{n}=12) \end{gathered}$ | $\begin{gathered} 12.28 \% \\ (\mathrm{n}=7) \end{gathered}$ | $\begin{gathered} 15.79 \% \\ (\mathrm{n}=9) \end{gathered}$ | $\begin{gathered} 26.32 \% \\ (\mathrm{n}=15) \end{gathered}$ | $\begin{gathered} 21.05 \% \\ (\mathrm{n}=12) \end{gathered}$ | $\begin{gathered} 3.51 \% \\ (\mathrm{n}=2) \end{gathered}$ |
| Q. 13 Do not see any benefits | $\begin{gathered} 33.33 \% \\ (\mathrm{n}=19) \end{gathered}$ | $\begin{gathered} 38.02 \% \\ (\mathrm{n}=22) \end{gathered}$ | $\begin{gathered} 14.04 \% \\ (\mathrm{n}=8) \end{gathered}$ | $\begin{aligned} & 7.02 \% \\ & (\mathrm{n}=4) \end{aligned}$ | $\begin{aligned} & 5.26 \% \\ & (\mathrm{n}=3) \end{aligned}$ | $\begin{aligned} & 1.75 \% \\ & (\mathrm{n}=1) \end{aligned}$ | $\begin{gathered} 0.00 \% \\ (\mathrm{n}=0) \end{gathered}$ |
| Q. 14 Do not know how intramurals work or how to sign up | $\begin{gathered} 22.81 \% \\ (\mathrm{n}=13) \end{gathered}$ | $\begin{gathered} 21.05 \% \\ (\mathrm{n}=12) \end{gathered}$ | $\begin{gathered} 8.77 \% \\ (\mathrm{n}=5) \end{gathered}$ | $\begin{aligned} & 5.26 \% \\ & (\mathrm{n}=3) \end{aligned}$ | $\begin{gathered} 35.09 \% \\ (\mathrm{n}=20) \end{gathered}$ | $\begin{gathered} 5.26 \% \\ (\mathrm{n}=3) \end{gathered}$ | $\begin{aligned} & 1.75 \% \\ & (\mathrm{n}=1) \end{aligned}$ |
| Q. 15 Prefer to join clubs over intramurals | $\begin{gathered} 3.51 \% \\ (\mathrm{n}=2) \end{gathered}$ | $\begin{gathered} 10.53 \% \\ (\mathrm{n}=6) \end{gathered}$ | $\begin{gathered} 10.53 \% \\ (\mathrm{n}=6) \end{gathered}$ | $\begin{gathered} 22.81 \% \\ (\mathrm{n}=13) \end{gathered}$ | $\begin{gathered} 29.82 \% \\ (\mathrm{n}=17) \end{gathered}$ | $\begin{gathered} 19.30 \% \\ (\mathrm{n}=11) \end{gathered}$ | $\begin{gathered} 3.51 \% \\ (\mathrm{n}=2) \end{gathered}$ |

*question 16 and 17 not included due to being free response questions

Table 2:
Descriptive statistics

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| Question \# | Min | Max | Mean | Std <br> Deviation | Variance | Count |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Q.1 | 1.00 | 4.00 | 1.40 | 0.67 | 0.45 | 57 |
| Q.2 | 1.00 | 2.00 | 1.67 | 0.47 | 0.22 | 57 |
| Q.3 | 1.00 | 2.00 | 1.56 | 0.50 | 0.25 | 57 |
| Q.4 | 1.00 | 2.00 | 1.84 | 0.36 | 0.13 | 57 |
| Q.5 | 1.00 | 4.00 | 3.19 | 0.74 | 0.54 | 57 |
| Q.6 | 1.00 | 7.00 | 3.14 | 1.67 | 2.79 | 57 |
| Q.7 | 1.00 | 7.00 | 2.72 | 1.31 | 1.71 | 57 |
| Q.8 | 1.00 | 4.00 | 2.58 | 0.95 | 0.91 | 57 |
| Q.9 | 1.00 | 7.00 | 3.89 | 1.22 | 1.50 | 57 |
| Q.10 | 1.00 | 7.00 | 3.65 | 1.16 | 1.35 | 57 |
| Q.11 | 1.00 | 7.00 | 4.16 | 2.07 | 4.27 | 57 |
| Q.12 | 1.00 | 6.00 | 3.75 | 1.53 | 2.33 | 57 |
| Q.13 | 2.00 | 7.00 | 5.82 | 1.22 | 1.48 | 57 |
| Q.14 | 1.00 | 7.00 | 4.68 | 1.80 | 3.23 | 57 |
| Q.15 | 1.00 | 7.00 | 3.63 | 1.45 | 2.09 | 57 |

Question 6 to 15 focused on questions related to participants' opinions on intramurals and
whether it contributed to their participation in intramurals. From the results, the main reasons that influenced many participants on their participation was their workload, whether their friends joined and if they had more interest in activities outside of intramurals. Many participants agreed that intramurals are beneficial and help relieve stress and anxiety, but instead, enjoyed playing sports where they did not have to focus on a team setting. This shows that even though many may know the benefits, it would not matter if they are not comfortable in the situation. Amongst

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all the factors, there were many that did not understand how intramurals worked, showing a significant factor that may be the reason behind the decline in participation. Additionally, it did not seem to be a great deal amongst the participants on whether they played sports with males or females. (See Table 1)

The next questions that the participants answered were free response questions. Questions asked included, "Have you participated in intramural sports with the opposite sex? If yes, what has your experience been with the participants? If no, what are your perceptions of participating with the opposite sex in intramural sports?" $50.8 \%(n=29)$ of participants stated that they have participated with the opposite sex in intramural sports, $43.8 \%(n=25)$ of participants stated that they have not participated with the opposite sex in intramural sports, and $5 \%(\mathrm{n}=3)$ of participants did not state if they had or had not participated with the opposite sex in intramural sports. The final question participants answered was "what are some suggestions you have to increase female participation in intramural sports?" Responses varied and examples will be mentioned in the discussion. Common themes included, advertisement and promotion and diversity within teams.

## Discussion

The results of this study provided us with a variety of responses that helped us gain a better understanding of the underlying issue that drives the purpose of this study. Over the years, women participation in intramural and recreational sports have been decreasing (Titlebaum P., Wallace P., \& Whaley A., 2012). From the results, it is shown that most participants understood that intramural sports benefit them. However, there were a few factors that led them to not participate in intramural sport. A major barrier that seemed to hinder women's participation in

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intramurals and recreational sports that was discovered through our research was the main mode of transportation, specifically transit. Out of 38 female participants, 20 of them use transit and do not participate in intramurals, 5 use transit and do participate, 7 of them drive a car and participate, 4 drive a car and do not participate and 2 walk and do not participate. This lack of participation in relation to an individual's main mode of transportation may be associated with time constraints that are present. Generally speaking, driving a vehicle as your main mode of transportation would be a lot more time efficient compared to taking transit, walking or biking. This parallels with Titlebaum, Wallace, \& Whaley (2012) who mentioned that females cited that a lack of time is one of many reasons that they do not seek out sport participation. What can also be associated with this time constraint is the workload that a third and fourth year student is responsible for. From the results of our survey, most participants somewhat agreed (33.33\%, $\mathrm{n}=19$ ) that the workload of third and fourth year constrains the ability for an individual to participate in intramural sports. Majority of third and fourth year students may have a greater workload due to completion of credits for graduation. Analyzing the data from this question overall, workload is a determining factor if an individual participates in intramural sports or not. Out of our 57 respondents, $47.37 \%$ of respondents agreed that participation in sports can help relieve stress and anxiety and $38.02 \%$ of respondents disagreed that there were no benefits of participating. To our surprise, results showed no respondents disagreeing with participation relieving stress and anxiety, as well as 4 respondents collectively agreed that there is no benefit to them for participating in an intramural sports team. This could be due to the fact that being placed in a social setting or a team-setting may inherently cause stress and anxiety for an individual. Those who do not participate in individual sports rather than team sports are

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neglecting necessary inter and intrapersonal skills needed later in life to be able to cope in certain social situations (McGinley et al., 2016; Titlebaum, Wallace, \& Whaley, 2012). Playing in a team-setting provides individuals with playful and social experiences that cannot be replicated when recreating alone (Titlebaum, Wallace, \& Whaley, 2012). Skills gained includes "constructive communication, active listening and participation, open and willing sharing, cooperativeness, willingness to help, flexibility, commitment to the team, problem-solving, and treating others in a respectful and supportive manner" (Titlebaum, Wallace, \& Whaley, 2012, para. 5). Therefore, we asked in the survey if respondents would enjoy playing an individual sport where they would not have to worry about being in a team-based setting. Most of the respondents somewhat agreed at $26.32 \%$ or agreed at $21.05 \%$. Overall, individuals may prefer individual sports where they do not have to worry about being in a team-setting despite the benefits of playing on a team sport. However, the likelihood of an individual to participate in intramurals seem to drastically increase when a friend joins as well. The reason behind this may be due to women enjoying the sport more when there is a social atmosphere where they are able to engage with their friends (Titlebaum, Wallace \& Whaley, 2012). Similarly, we found that out of 57 respondents, 37 generally agreed that they would participate in an intramural sports team if their friends joined.

Titlebaum, Wallace, \& Whaley (2012) mentioned that from their research, female participants cited that a lack of skill was a determiner if they participated in a sport or not. We provided a similar question where we asked if individuals lack skills to play intramural sports despite having numerous teams of varying difficulty. Responses were mostly split; 27 either somewhat disagree, disagree or strongly disagree; 25 either somewhat agree, agree or strongly

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agree; 5 neither disagree or agree. This shows that just under half of our respondents would not participate in a sport due to their lack of skill, even though there are other teams of varying skill levels to help alleviate these concerns. Furthermore, the majority of our respondents who agreed that they lacked the skill to participate were female and felt that intramurals were still too competitive and were generally led by males. This may deter individuals from participating in intramurals and participate in other activities or join clubs. Because like Artinger et al., (2006) findings, fourth year students have had other social experiences outside of school that they enjoy, so joining intramurals would not give them the benefit of enjoyment. Just over half of our respondents $(\mathrm{n}=30)$ overall stated that they would rather join a club or participate in other activities other than participate in intramurals.

Additionally, we asked if respondents were more likely to participate in sports based on the gender composition of a sport and if friends joined the same sport. Responses were similar yet varied between males and females. Respondents neither disagree or agree that more males or more females' participants in a sport would encourage participation at $38.60 \%$ and at $36.84 \%$ respectively. However, there was a larger percentage of respondents who somewhat agreed that having more females in a sport would encourage participation at $33.33 \%$. Compared to having a larger composition of males in a sport, $19.30 \%$ somewhat agreed and $21.05 \%$ somewhat disagreed. This may be due to the fact that we have more respondents who identify as female in our survey or that we have included males in our survey. Moreover, the results did not have significant differences, and this may be due to the number of women needed for the intramural teams (Baghurst et al., 2014). For example, co-ed teams need fewer women athletes compared to

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all-female teams, so depending on the team one joins, it can contribute to whether one feels the desire to participate (Baghurst et al., 2014).

In terms of people understanding how intramurals work and how to sign up, the majority of respondents $(\mathrm{n}=30)$ understand how intramurals work while a close minority do not understand ( $\mathrm{n}=24$ ). This shows that even though there is a majority of individuals who know how to get involved with UBC intramurals and recreation, there is still a considerable number of individuals who do not.

We could see from our findings that there were mixed reviews for those who did and did not participate in intramural sport. For those participants that have, inclusivity, diversity, and encouragement were common themes of respondents. Those participants had a good experience in intramural sport with any gender and would recommend joining intramurals. However, for the other participants that did not enjoy or participate in intramurals, gender gap was a common theme. Participants thought that having both genders in intramural sport would amp up the competition which some did not enjoy. Females join recreational sports to endure more activity and have fun with their friends, not necessarily there for competition (Artinger, et. al, 2006). Some respondents added that males made the environment more tense, they felt overpowered by males, and had higher expectations. Females wanted a more recreational and lower level of competition for intramurals.

Additionally, we asked participants if there were any recommendations, they would like to address to increase more women participation in intramural sport. A suggestion that came up many times mentioned advertisements. Advertisements about intramurals and sport are still very male dominant. Participants would like to see more female leaders and students shown.

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Furthermore, awareness in intramurals and their benefits would help encourage more females to participate. Many participants are aware of intramurals however, they may not see the health benefits unless stated. Lastly, female only leagues and other activities besides the traditional sports would motivate more females to come out and join. Most intramural sports require a high level of competitive skill despite the different levels. The atmosphere during games is usually very competitive which some females did not like. Making the activities at a more recreational level would encourage more females to join. Overall, with our research on women's participation of intramurals at UBC, it provides an idea of how some of these factors may also contribute to other populations outside of UBC.

One of the problems that we encountered is the specific population that we chose. We restricted the survey to only third and fourth year students studying at UBC. Since it was shared through multiple social media platforms, we are unsure if all the answers were completed by the criteria we were looking for. Some examples are that multiple results may have come from students that study outside of UBC, as well as from first and second year students. Additionally, a challenge that arose was determining whether participants' responses were answered truthfully. Some reasons could be that many participants were eager to win the prize that was provided, and having our close friends answer very casually.

There is still limited research about women in intramural sport specifically. Our study could give additional information to help further research. Results would further encourage research in intramural sport, marketing and promotion strategies, student involvement, and school community. In our study, we decided to get additional information from male participants to see their point of view and see if any opinions were similar to the female participants.

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However, this may have altered our responses and created a less accurate study. Further research should be focused primarily on women participants to gain a better understanding of women's perspective of intramural sports.

Furthermore, looking into students that are international and that transferred from another institution to gain a better understanding on whether these could be potential barriers for their participation in intramural sports. Language can be a problem for international students and coming from another institution that may have not provided intramurals may be an issue as well.

Our study had variables that were very broad to oversee a more general study. Future research could include additional questions that are more specific, such as switching up the variables (i.e. stress vs. intramural sport).

## Recommendations

There seems to be many barriers that women face that restrict them from participating in intramurals. To overcome these factors and improve the program of intramurals, a fixed onehour time slot in the day may provide a solution to allocating more time used for participation in intramurals or promotion of physical activities. An example would be having the time slot on Mondays, Wednesdays, and Fridays in the afternoon where all the gymnasiums will be open to any students. Additionally, the majority of the students will be able to practice and socialize amongst others where they may get an opportunity to meet new people and form teams for intramurals. Implementing a fixed one-hour would also allow all faculties to offer students an allotted time to participate in any available health promoting activities. Besides physical activities, other health promoting activities can include workshops that educate students and staff on topics of nutrition, benefits of physical activity and mental health. In order to make this

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happen, meetings with the UBC Recreation would be considered to be able to implement the time frame.

In our surveys, there were many students that stated that they were unsure how the intramural sports work or how to participate in them. To help such difficulties, one recommendation is to promote intramural sports more effectively. Many of the student population's attention is being drawn into their phones, spending their time on Facebook, Instagram, Twitter, and etc. (Arora et al., 2019). Being able to promote often on any of these social media platforms will attract more attention onto the UBC Intramural sports.

Specifically, transfer students or international students may not be aware of how the intramural sports work and to participate in them because they may have not been exposed to intramurals in their previous school. Our participants suggested that putting up posters around campus or having advertisements would attract more attention as well, but they believe most advertisements about intramurals and sport are still male dominant. Focusing on more female leaders and students will heighten the interest of women. The advertisement that is already out in the public is also often hidden in bathrooms, crowded on poster boards, and only visible in certain parkades. Increasing advertisements in classes and through social media will have an impact on increasing participation. While many may understand that there are benefits, these individuals often do not know exactly how they will be benefitted. Females also look for more activities that will benefit them and when evidence is shown in promotion, participation is increased (Artinger, et al., 2006).

Another recommendation is providing a wider range of sports as well as individual sports. This opportunity will allow students to be able to choose more freely rather than being

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held within the boundaries of a limited variety of sports. Sports to include may be open ice time to have a puck and skate time, or for students to use to practice. Choosing individual sports opens up the possibilities for individuals to be creative with how they are going to express themselves in activities.

Currently for intramurals, teams that win first place achieve a complementary prize of Tshirts for each member. However, teams that do not end up winning, end up with no reward. To help enhance the participation of intramurals, T-shirts would be given to all participants and their team. This way, participants would have something to look forward to when joining intramurals. As for those teams who win 1st, 2nd or 3rd place, gift cards or sportswear may be the exceptional prize in addition to their T -shirts.

## Conclusion

The purpose of this study was to examine the barriers that come in the way of women participating in intramural sports and determine new elements for UBC sports and recreation to include in future seasons. The literature that was discussed above focuses on intramural sports being a place for social interaction and building connections with participants. Within our findings, we found that while this is a place for creating social connections, this is also an opportunity for individuals to build and develop new skills and try out new sports. Throughout the literature and our own research, we found that there were common factors that either promote or prevent individuals from participating in intramural sports. The suggestions that were uncovered in our findings explored the barriers of UBC student participation in intramural sports and how to increase participation in these sports. The conclusion that we have come to is that sport diversity, advertisement, promotion of health benefits, inclusivity, and type of

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transportation will increase participation. Each element has strengths that push women more into participation and increase overall intramural participation. The exploration of the barriers and motivation of participants at UBC who took part in this study will help in future research and increase knowledge around women participation in intramural sports and expand programming resources to help create new recreation programs.

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Appendix

https://ubc.ca1.qualtrics.com/jfe/form/SV_0J4wGo7IbhmiYPH

## Survey Questions:

1. What is your gender identity?
2. Are you a third year or fourth year student?
3. Do you participate in intramural or recreational activities?
4. Do you live on or off campus?
5. What is your main mode of transportation?

## Likert Scale Questions:

6. The workload of 3rd and 4th year courses restrict me from participating in an intramural sport team
7. If my friends joined an intramural sport team, I will also participate
8. Intramural sports can help relieve my stress and anxiety
9. I have been more encouraged to participate in sports with more males
10. I have been more encouraged to participate in sports with more females
11. I believe i lack the skills of sports in participating in intramurals despite the different levels intramural teams they offer
12. I enjoy playing sports where I do not have to worry about playing in a team setting and focus on myself
13. I do not see anything that can benefit me participating in an intramural sport team
14. I do not understand how intramurals work or how to sign up for it

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15. I would prefer to join clubs or participate in other activities other than intramural sports teams

Open-Ended Questions
16. Have you participated in intramural sports with the opposite sex? If yes, what has your experience been with the participants? If no, what are your perceptions of participating with the opposite sex in intramural sports?
17. What are some suggestions you have to increase female participation in intramural sports?

