UBC Social Ecological Economic Development Studies (SEEDS) Sustainability Program

Student Research Report

Targeted Health Promotions Through the Use of Digital Media

Aaron Rodriguez-Correa, Nitai Weinberg, Lauren Palmer, Connor Sampson, Aziza Abdul Qader

University of British Columbia

KIN 464

Themes: Health, Community, Wellbeing

April 2, 2019

KIN 464 - University of British Columbia

Final Report: Targeted Health Promotions Through the Use of Digital Media

Group #8

Aaron Rodriguez-Correa: 49793152

Nitai Weinberg: 20188158

Lauren Palmer: 78122231

Connor Sampson: 46666153

Aziza Abdul Qader: 89356349

April 2, 2019

Executive Summary

Currently, the University of British Columbia (UBC) Recreation (Rec) department is looking to improve the accessibility and usability of their website in order to increase engagement from UBC students. As well, they wish to increase participation in physical activity and fitness programs on campus by having a strong digital media presence. It is theorized that by making the website more engaging, it will ultimately increase fitness program participation on campus. The purpose of this study is to explore the literature to gain more insight on methods using digital media that have previously been successful in increasing student engagement in physical activity. Through finding effective methods, comparisons are made to see what UBC Rec is currently doing well, and what recommendations can be made in improving aspects that are not yet working in favour of reaching said goals. A survey including questions varying from current physical activity participation to awareness and use of the UBC Rec website was distributed to various demographics within the UBC community to gain an idea of how much the website is already being used, and where people are getting their information from currently. Once the findings were observed, it was determined that the majority of the participants do not use the website as their primary source of information for recreation programs on campus. The majority also agreed that if the website were to be improved and more advertised on campus, that the likelihood of them using the website would be greater. The majority of the participants were physically active, and the majority did not participate in physical activity on campus. With this information, the goal of this study is to provide justified recommendations to the UBC Rec website editors in improving the accessibility, design, and usability of the website by students and members of the UBC Community.

Introduction

Physical activity has a large impact on our overall physical and mental well-being (Fox, 1999). Many universities, colleges, schools and communities have websites promoting physical activity within their area, but are in need of improvement. Our literature review will be focusing on the impact digital media has for promoting and influencing physical activity among university students, in particular UBC students. We collected information about student use of the UBC Rec website fitness classes and programs use by sending out online surveys to UBC students on campus. We then looked at which students were using the website currently and which students had not heard of it or do not currently use it. Our study will be focusing on implementing the strategies that we found effective in engaging students with the UBC Rec website. We focused on how UBC can improve their website to engage the students and increase their participation in on-campus fitness programs. We compared UBC's website to a couple universities such as University of Toronto (U of T), University of Alberta (U of A), and Queen's University (Queen's). These comparisons helped us recognize the faults in the website, and in turn, identify effective ways to improve the website.

Literature Review

After reviewing and comparing the UBC Rec website to other universities and acknowledging the strengths and weaknesses that the website entails, we came up with some ideas to improve the website. Some of the other universities offered good visual displays on their

website which we thought would help engage the students and grasp their attention. We found that most universities had recreation website which were easily accessed, modernized and emphasized the significance of health and well-being. We also reviewed some methodologies that have worked in the past to improve physical activity with interactive websites. One study that was conducted which stood out the most to us was 'Web 1.0 vs. Web 2.0 Engagement' (Kolt et al., 2017). In this study that was conducted, Web 1.0 included websites with less interactivity and social support, whereas, Web 2.0 involved websites with an experience which was much more interactive and engaging (Kolt et al., 2017). When comparing the two technologies they found that Web 2.0 resulted in an increase in short term website engagement and physical activity behaviors (Kolt et al., 2017). We found that the other universities which we compared our website to such as, University of Alberta (U of A), University of Toronto (U of T) and Queen's University (Queens), seem to be more Web 2.0 than Web 1.0. This leads us to believe a more interactive and engaging website will increase the number of students participating in UBC's recreation activities.

Another study we looked at which is also a good strategy to increase physical activity adherence is group-based physical activity (GBPA) (Harden et al., 2015). In this study, they found that individuals that participate in GBPA will be more likely to continue that type of exercise program (Harden et al., 2015). The studies conducted were found to be successful on various populations: women, adults living with chronic disease, university students, women attending university at risk for chronic disease or living with chronic disease, and obese individuals (Harden et al., 2015). Relating this information to the UBC Rec website, this encourages us to believe implementing more GBPA will increase participation of the students. During the study there were also environmental factors and behavior constructs taken into consideration such as, available resources, accessibility, policies, having social support, friendly competition, feeling of belonging and group cohesion (Harden et al., 2015). Acknowledging these findings, we can use some of these strategies to help make a positive impact and to promote engagement with the website.

Methods

Once we have completed the literature review, we compared what has worked in previous studies to the current UBC Rec website and what it is lacking. After making these comparisons, we created an online survey using Qualtrics with questions covering different aspects of participants' physical activity (Appendix B).

The questions vary from the participants' current physical activity level, their participation in fitness on campus, their awareness of the different fitness programs and activities on campus, and their awareness and participation on the UBC Rec website. One of the most important questions on the survey was whether the UBC students were aware of the UBC Rec website. If they were, did they refer to the website for the information. If they did not, what methods could we implement to better enhance the website and increase the probability of the participants to refer to the website for fitness and physical activity information in the future. The online survey was implemented and distributed by using qualtrics survey engine.

The participants were recruited by posting the online link to the survey on various different UBC clubs' facebook groups as well as, sent to individuals that were not involved with

the Faculty of Kinesiology but were enrolled at UBC. We aimed to gain the most diversity by posting on non-sport related clubs to gain more variety in responses from those outside of the kinesiology faculty. We collected 24 completed surveys and reviewed the responses to gather the information in regards to current awareness and engagement on the website by UBC students. Consent was gathered by indicating the need for it at the start of the survey, where the participant will click a tab that indicates we have received consent before proceeding with the survey completion.

Findings

From the 24 responses analyzed, we established two themes from the questions that were asked on the survey. These themes highlight the importance that digital media may have on health promotion on the UBC campus. These themes are illustrated using graphs that highlight the importance of the survey question being asked. For example, the participants were asked about their awareness of the UBC Rec which was highlighted in question 13 (Appendix B).

UBC Student Awareness

We found that from the 24 students surveyed over 80% of them were aware of the UBC Rec programs available on campus, with 20 students agreeing that they were aware of the programs available on the UBC campus (Figure 1). The diversity even within these 20 students showcased the ability for UBC Rec to promote their programs to students, with students ranging from Kinesiology, Science, Sauder, Arts, Education and even Forestry.
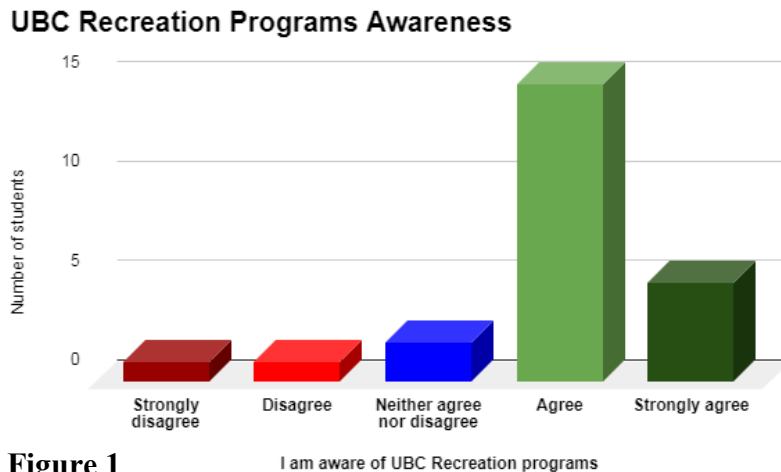

Figure 1

However, although UBC Rec programs were well known throughout our participants, it was clear also that UBC's Fitness Programs & Classes were not as well known. Out of the 24 students surveyed it was found that 50% of them were not aware at all of the fitness programs or classes that UBC has available (Figure 2).
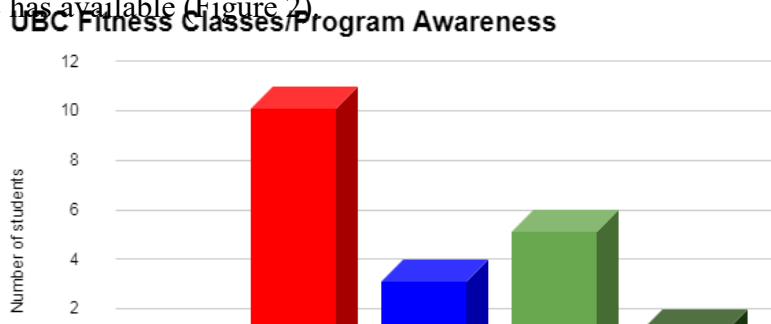
Figure 2

UBC Recreation Website Use

The importance of the website was a critical component for this research project. The theme of using the website was one that was highlighted throughout the survey questions (Appendix B). It was found that from the 24 students surveyed 13 of them would agree that they would potentially use the website if there was an update made to it. The following were a few student responses in regards of the website.

Student Responses

I definitely think the website could be more visually appealing and the UI could be simplified to offer more information for users

Calendar was a bit jumbled... UBC's interfaces are generally not as user-friendly as most people would like (e.g. SSC) but it is not overly difficult to use.

Overall, students also would use the UBC Rec website a lot more after seeing the information that it has and potential value it could bring to their health promotion. 12 students agreed that they would use the website more often, however the other 12 students were either neutral or disagreed (Figure 3).
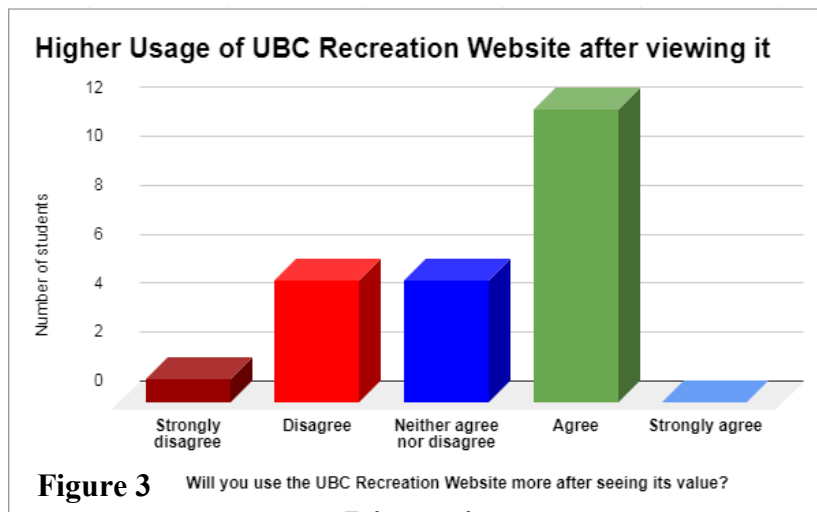

Higher Usage of UBC Recreation Website after viewing it

Figure 3 Will you use the UBC Recreation Website more after seeing its value?

Discussion

Demographics

We had various demographics respond to our survey. Both male and female participants between the ages of 18-44, who were in faculties such as: Business, Forestry, Science, Kinesiology, Arts and Education. The majority of students that responded were between the ages of 18 to 23, there were more male participants than female, and although the participants were in a broad range of faculties, the majority were in Kinesiology, Business, Arts, and Science.

UBC Student Physical Activity & Awareness

The key findings revealed that the majority of students participate in physical activity, and most are aware of UBC REC Programs. On the other hand, we found that most students do not participate in physical activity programs on campus and are not aware of fitness classes/programs on campus. It seems that there is a disconnect between the awareness of UBC REC as an organization and the fitness classes/programs that UBC REC helps provide for students on campus.

UBC Recreation Website Use

Our research also investigated participant's opinions and experience with the UBC REC website. We found that most students do not use the website often, but that the majority of them had agreed that improving the website will increase their likelihood of using it. Most participants had also suggested that they would check the website after they saw what it had to offer. The main point here is that there is clearly a lack of awareness among students in relation to this website, as students do not seem to be using it often. However, the research suggests that participants will be more likely to use the website if it becomes improved and modernized.

Open Ended Questions

Two open ended questions were asked in our survey. The first question asked participants if they had difficulties with the UBC REC website. Those that had issues with the website expressed a desire for the website to become easier to navigate and more visually appealing. In this case, it may be good to implement Web 2.0 technology to modernize the website (Kolt et al., 2017). However, the biggest issues was that students either don't check the website or expressed that they have never checked the website.

When we asked a question about improvements for UBC REC's digital platform, and what would increase one's likelihood of using it we received mixed responses. A lot of students had said that the website does not need to be improved or did not have a response for this question. This does not necessarily mean that students felt the website was good and easy to navigate, it could also show that not all students were focused throughout the survey. Another potential reason some students may have not responded is because the survey was too long and they may not have felt like answering the open ended questions once they got to the end of the survey. Additionally, it is possible that there was some response bias that affected students responses, and so the truthfulness of these responses or their meanings are not entirely clear.

However, some students responded differently; some participants said the user interface and visual appeal need to be improved to increase their engagement. Others said that promoting these resources on campus would help increase their use of it, as well some said that increasing the convenience and access of the website would increase their use. To summarize, the students

that had suggestions recommended to modernize the website and make it more accessible or promote it more on campus. This would help create a better user experience, and increase awareness of these resources on campus. An effective way to promote these services may be to access social media channels (Santarossa & Woodruff, 2018).

Challenges & Limitations

Although we received quite a few responses and overall got good responses from participants, there were certain challenges with faced in terms of research and certain limitations that our data faces.

Firstly, our sample size was relatively small. We received 27 responses, however only 23 participants had completely filled out the survey. The other 4 had left areas blank, skipped questions, or inserted answers that seemed like an error, for example one response was 'j'. Secondly, for the open ended questions some participants had provided n/a as an answer. This makes it hard to infer how they actually felt because they may have given that response for other reasons. For example, they may have felt that the survey was really long and they did not have the energy or desire to continue with it. Or, maybe they were in a time constraint and they didn't have time to finish the survey so they chose that response. Thirdly, the surveys were distributed to Facebook groups on campus, such as the Chinese Varsity Club, Alpha Epsilon Pi, as well as friend groups from our research team. There may have been biases with the responses because most of the respondents were affiliated in some way to our team. For example, social desirability is a type of response bias defined as a response that is influenced by what is considered to be more socially desirable (Chung & Monroe, 2003).

Another possible limitation could have been the method in which the participants performed the survey. Viewing the survey through mobile or through a desktop will give a different user experience. Thus, this could have impacted our ability to gather the most accurate data on student's perceptions of the website. Additionally, a variable that could have influenced participant's responses could have been their level of tech savviness. It could be possible that those that did not have an issue with the website were very comfortable using different platforms, whereas those that were less tech savvy could have had more difficulty and require more user-friendly platforms. All of these issues are important to take into consideration when looking at future studies.

Future Outlook

In future studies, we recommend that the survey length be shorter. We would take out questions from this survey that seemed irrelevant. For example: "I do not participate due to financial barriers", "My faculty promotes physical activity", "I believe that participating in UBC Rec programs should be part of the requirements for my program", and "Does the language used compel you to go to these classes?". As well, in order to ensure no survey questions are skipped, it may be beneficial to make all the survey questions mandatory so that there are none that are not accounted for.

It may be beneficial to create an incentive for for participants in order to get a full and honest answer for the open ended questions of the survey. Firstly, it will be important to express the importance of their full response and participation in their answers. Secondly, it may be good to have a raffle that they could all be entered into to receive a gift card, or to partner with UBC REC for discounts/free classes for their classes/programs for all those that submit the survey. The second option has two benefits: 1. It will encourage more people to participate in those classes & programs, and 2. It will encourage more participants to give full and honest answers.

There should be a longer timespan to recruit participants for the study (eg. 1 month), so that the research team can get a bigger sample size of approximately 50 to 100 participants. One of the ways that it can be recommended to mitigate variability due to mobile v. laptop viewing of the website would be to set up booths in the AMS Nest and IKB Library with a computer for students to fill out surveys. This way the research team can ensure that all students open up the survey on a desktop as opposed to mobile platforms.

Implications of Research

Furthermore, we believe that this research can help illustrate the importance that digital media can play for promoting certain topics, in this case health. From the surveyed participants there is a disconnect with UBC Rec programs and actual fitness classes/programs. This may be due to a few reasons, however as shown with there is a potential likelihood of individuals being more engaged with the website after an upgrade or even after seeing what it can offer (Figure 3). As the world keeps becoming digital focused and tries to engage the potential consumer it is important for institutions to be well informed on their online impact. If the ability of implementing a well-informed and modern website can increase health promotion for certain students, then that is an investment that should be done. An institution like UBC that is well-known throughout Canada and even the world, should be at the forefront of ensuring they are doing their best to increase student health promotion. The ability of being a leader for others can hopefully showcase the importance that digital media has towards others and therefore create a movement. This will deeply impact a larger population than just the students on the UBC campus, but other campuses in Canada and hopefully the world.

Recommendations

There are a number of recommendations that can be made to increase the use of the UBC REC website, with the ultimate goal of increasing participation and physical activity among students in these programs made available by the university. When referring to the survey results, a few recommendations that could be suggested are updating the website and improving the navigation of the website, and increasing the promotion of the website and programs. In regards to increasing physical activity among students, the use of GBPA has been shown to increase participation levels.

The first recommendation that could be made is updating the website. A majority of the participants in the survey suggested that the website was not up to date and that it needed to be more visually appealing. Thus, it seemed to reflect web 1.0 technology, which is less interactive and has a more static design creating a poor user experience (Kolt et al., 2017). Other university

websites, such as: U of T , U of A, and Queen's all incorporate web 2.0 technologies, which is characterized as a more interactive experience because there is higher user engagement and user retention (Kolt et al., 2017). It is proposed that the web 2.0 technology has a lot of potential for promotion of physical activity because it is more engaging to interact with (Kolt et al., 2017). Therefore, by updating the functionality of the website to a web 2.0 style it will be more engaging and according to our research some students will be more likely to use it for information regarding UBC REC fitness classes/programs.

The following are some examples of ways that U of T has implemented web 2.0 technologies to make their website more engaging. For example, they included a 'weight room 101' video tour to teach beginners basic workout programs and the fundamental movement skills to allow students to apply them to their own workouts (University of Toronto, 2019). Additionally, U of T's website is also linked with Instagram, Facebook, Twitter and Youtube to ensure all students are aware of what is going on with the recreation center. It is recommended that UBC REC implement a similar approach to get students more engaged with their online platform.

Additionally, a large majority of the survey participants found the website messy, hard to navigate, and jumbled. Thus, improving the navigation functions of the website by following other university websites like U of T , U of A, and Queen's may help improve its functionality and ease of use. According to the survey results, these improvements could increase the likelihood of students using the UBC REC website. For example, the Queen's website included headings that a user could hover the cursor over, and relevant information about those headings would pop up in a list format that a user could choose from (Queen's University Athletics, 2019). This creates a fluid user experience that makes browsing the website much easier, as opposed to being redirected to a new webpage with every click.

The second recommendation that could be made is increasing the promotion of the website. The survey results suggested that a large majority of the participants were completely unaware of the fitness classes available to them on campus. The research conducted also suggested that participants were more likely to use the website after becoming aware of what the UBC REC fitness classes/programs had to offer. Thus, possible solutions could be to promote the website through various channels. In particular, the literature review suggested that the use of digital platforms have been shown to increase the interest in health promotion activities (Santarossa, 2018). Thus, there is a lot of potential with using social media channels to promote the UBC REC website. A two-week study investigated by Santarossa (2018) incorporated university students posting pictures on the social media platform, Instagram, with the prompt "what does being healthy on campus look like to you?". There was low participation in this study, however, it ended up being a positive promotion tool. This showed that this promotional tool has significant potential and this approach with prompts can be applied to promotion of the UBC REC website (Santarossa, 2018). For example, instead of using the hashtag of the school's name (#Lancerhealth), future campus initiatives could use #UBCHealth to promote UBC REC fitness classes and programs (Santarossa, 2018).

According to Harden et al. (2015), a way to increase participation in physical activity could be to have individuals participate in GBPA, as studies have shown that they will be more likely to adhere to that type of program or exercise class. This study found success with university students, obese individuals, and women attending university at risk for chronic disease

or living with chronic disease (Harden et al. 2015). With the guidance of a trained peer leader or group exercise leader and a common goal between the individuals, this strategy will prove to be beneficial in promoting physical activity (Harden et al. 2015). Therefore, by increasing awareness through social media channels, modernizing the website, and increasing its functionality more students will be able to educate themselves about the website. In turn, this will lead to more people participating in UBC REC fitness classes and programs, which means more students will participate in GBPA. And as GBPA is shown to increase adherence, and therefore students will be more physically active.

References

Chung, J., & Munroe, G. S. (2003). Exploring Social Desirability Bias. Journal of Business
Ethics,291-302. doi:https://doi.org/10.1023/A:1023648703356

Fox, K. (1999). The influence of physical activity on mental well-being. Public Health Nutrition,
2(3a), 411-418. Doi:10.1017/S1368980099000567

Harden, S. M., McEwan, D., Sylvester, B. D., Kaulius, M., Ruissen, G., Burke, S. M., &
Beauchamp, M. R. (2015). Understanding for whom, under what conditions, and how
group-based physical activity interventions are successful: a realist review. *BMC public
health*, *15*(1), 958. Doi: 10.1186/s12889-015-2270-8

Kolt, G. S., Rosenkranz, R. R., Vandelanotte, C., Caperchione, C. M., Maeder, A. J.,   Tague,
R., ... & Duncan, M. J. (2017). Using Web 2.0 applications to promote health-related
physical activity: findings from the WALK 2.0 randomised controlled trial. *Br J Sports
Med*,*51*(19), 1433-1440. DOI:10.1136/bjsports-2016-096890

Queen's University Athletics. (2019). The Official Website Of Queen's University Athletics and
Recreation. Retrieved from https://rec.gogaelsgo.com/index.aspx

Santarossa, S., & Woodruff, S. J. (2018). #LancerHealth: Using Twitter and Instagram as a tool
in a campus wide health promotion initiative. Journal of public health research, *7*(1),
1166. Doi: 10.4081/jphr.2018.116

University of Toronto. (2019). University of Toronto Faculty of Kinesiology and Physical
Education. Retrieved from https://kpe.utoronto.ca/sports-and-rec

Appendices

Appendix B

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1. I check the UBC Recreation website on a regular basis					
2. I have trouble finding or navigating the website					
3. I refer to the UBC Recreation website about fitness classes and programs					
4. Improving the website will increase my likelihood of using it for information					
5. Does the language used compel you to go to these classes?					
6. Is the platform visually appealing?					
7. After seeing what the UBC REC website has to offer, will you want to check out the website for yourself?					
8. Is the user interface intuitive in nature?					
9. Are the pictures above representative of your background?					
10. I participate in physical activity often					
11. I participate in recreation programs/classes on campus					
12. I believe that participating in UBC Recreation programs should be a part of the requirements for my program					
13. I am aware of UBC Recreation programs					
14. I believe UBC is a good environment to participate in recreation and fitness programs					

15. I am aware of all the fitness classes available on campus					
16. Financial support would increase likelihood of participating in programs					
17. I do not participate due to financial barriers					
18. My faculty promotes physical activity					
19. If you have difficulties with the website explain why.					
20. If you believe improving the website will improve your likelihood of using it, explain why.					

Appendix C - General Questions

1. Age
2. Gender
3. Faculty

Appendix D - Consent Form

Q4 - Hi there! We are a group of KIN 464 students who are gathering information from UBC students on the topic of physical activity, more specifically the impact of digital media has on it. With your permission, we are asking you to participate in this survey. With the information gathered, students will critically examine on how to better understand the impact digital media has on UBC students. Ultimately with hopes on improving the potential areas that are lacking within the community. If you would like a further information about this survey or have any questions please do not hesitate to contact the Research Participant Complaint Line in the UBC Office of Research Ethics at 604-822-8598 or e-mail RSIL@ors.ubc.ca, or call toll free 1-877-822-8598. Thank you for taking the time to read this.

#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count