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Student Research Report

Identifying and Addressing Barriers That Have Resulted in a Lack of UBC REC Family

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Identifying and Addressing Barriers That Have Resulted in a Lack of UBC REC Family

Physical Activity Programs:

Final Report

Group 6 Project C

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KIN 464: Health Promotion and Physical Activity

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Executive Summary

The purpose of this research study was to examine family recreation programs for promoting and encouraging family physical activity, and the role that UBC REC can play in providing those programs. First, a literature review was completed to determine what is already known about children's physical activity (PA), the relationship of PA to their family life, and determine a gap in research that could be filled to better inform this subject. The research shows that children and adolescents have had declining levels of PA for decades. Children are not meeting daily or weekly guidelines for moderate to vigorous physical activity or incidental movement. A 2014 study for the Vancouver area confirmed this decline (van Loon et al., 2014). ParticipAction 2020 statistics show similarly low levels of PA have been further impacted by the Covid-19 pandemic. Studies show that parent's support and encouragement, direct involvement, and their own PA, can have a positive impact on a child's PA and ability to meet guidelines (Burgueno et al. 2020; Thompson et al. 2010). Conducive locations with park land and indoor facilities and safe outdoor spaces correlate with increased PA (van Loon et al., 2014).

After identifying a gap in determining specifically what parents needed in order to get and keep their children physically active, a survey was designed to connect to UBC families and determine what they perceived to be their barriers. A 19 question Qualtrics survey was developed using the Health Belief Model as a guideline. UBC parents or ones who used UBC REC facilities were asked questions pertaining to the barriers they perceived in getting their child(ren) to participate in PA, and their self-efficacy of guiding their child(ren), and other questions designed to draw out what they needed in terms of type and timing of programs and other supports. The survey was distributed to the UBC Families Facebook page. There were 32 responses to the survey. The responses were analyzed through statistical analysis using JASP for the multiple choice and trend analysis for the short answers.

Research has shown that parents are pressed for time. Work, commute, and daily chores take up much of their day with little time left for exercise and leisure pursuits. This was borne out in our survey with parents indicating that time was their biggest barrier and that the need for flexible recreational programming was high. Many parents did not feel that they were prepared to guide their child(ren) to appropriate levels of PA. These responses lead to the solution that UBC REC offer flexible, potentially drop-in, programming that is available weeknights and weekends that is suitable for a variety of ages and that activity can be structured to the group available at each session. Outdoor activity programs and parent-only training for implementation of child PA programs are also suggested.

Child and adolescent PA continues to decline even as more parents are aware of its importance. What has been done to encourage sports team participation is not reversing this trend. A new approach is needed. Families that actively play together have been shown to have children with more PA and who develop intrinsic motivation. UBC REC programs that can promote family PA in a time frame that works for families, and also promote outdoor activity that can be done independently, may fill the parents' needs.

Health and welfare of Canada's next generations will decline if PA levels for children and adolescents are not increased. Healthy PA levels as adults can be aided by learning and doing PA and developing intrinsic motivation as a child. Parents are the gatekeepers to family PA, and it is their support, involvement and encouragement that can turn around the current low levels of PA. However, they need supportive community systems that can help them obtain family PA in a safe and opportune manner.

Introduction and Literary Review

Over the years, research involving youth participation in recreational activities has been at the forefront of health promotion. Health Canada uses the Canadian Society for Exercise Physiology (CSEP) 24-hour Activity Guidelines in recommending 60 minutes per day of moderate to vigorous physical activity (MVPA) for youth (Health Canada, 2019). For decades, the Canadian government has used these physical activity (PA) studies to help educate the public about the importance of PA for a healthy lifestyle. However, these methods have proved ineffective, as physical activity levels continue to decrease year by year. A Statistics Canada census found that in particular, youth populations were less likely to participate in recreation in 2005 compared to 1992. Dropping from 57% in 1992 to 51% in 2005 ("Kids Sport.", 2008). More recently, a 2014 Vancouver study saw that physical activity levels for youth are continuing to decline with less than 9% of boys and 4% of girls meeting 60 minutes per day of MVPA guidelines (van Loon et al., 2014). In 2020 ParticipAction reports similarly low participation rates for children being exacerbated by Covid-19 restrictions (ParticipAction, 2021). With current health promoting methods showing little impact and participation levels decreasing over the past 20 years, there is a need for a new path in promoting youth PA. The implementation of family recreation has significant evidence to suggest it may be a considerable factor in increasing the youth PA rates as well as other health promoting behaviours (Burgueno et al. 2020; Thompson et al. 2010).

Notably, the majority of family PA literature shows that when parents are active and/or supportive there is an increase in PA levels among youth. For instance, a study by Stranbu and colleagues (2020) conveyed that families with an increased affinity towards sport and recreation undoubtedly promote youth participation in organized recreation. The research deems "Family Sport Culture" as the leading factor in promoting participation in a family

setting. This idea of family sport culture is echoed in Gustafson and Rodes (2006) research review of 34 PA studies that found positive correlations between parental PA behaviours and the overall PA levels of their children. Children's PA levels were also positively correlated with parental encouragement and support for children's physical activities (Thompson, et. al. 2010).

More recently, an experimental study done by Rhodes et al. (2019) suggests that as children are under the care of their parents for the majority of their childhood, having family-based PA interventions through the children's gatekeeping parents is the best way to increase PA holistically, for both parents and children. Much like the findings from health care professionals in the mid-1970s, the researchers of the Rhodes et al. (2019) study found that simply educating the parents on why they should be physically active was not enough, and rather how they can be physically active was more beneficial. Findings from the Rhodes et al. (2019) study showed that families were remaining physically active together at the six- and thirteen-week marks of the study, but not at the twenty-six-week mark therefore concluding that follow-ups from the researchers is a necessary component to changing the PA of a family's lifestyle. As illustrated in the literature above, parent PA involvement and facilitation can be critical factors to increasing the PA levels of youth participants, therefore the implementation of family recreation may be a component to improving the short-term PA of the younger populations.

Not only does family PA impact youth participation levels, but it has also been seen to influence the long-term behaviours and habits children form around PA. To illustrate, a study completed by Burgueno et al. (2020) tackles the concept of intrinsic motivation in a family-based PA setting. In short, the objective of this study was to see the implications of motivation on participants through family-oriented PA and its relative impact on producing healthier family habits. Their research highlights that motivation is an important component

to increasing PA (Burgueno et al. (2020)). In other words, stating that improved PA participation is partly dependent on the level of intrinsic motivation a family has. The literature also recognizes the significance of motivated families, conveying that parents that had or developed intrinsic motivation were more likely to participate or remain in family-based PA programs. Interestingly the study also noted that parents have a harder time developing that intrinsic motivation when they are not involved. Thus, suggesting the importance of family-oriented programs. Overall, this study showed that there were correlations between increased intrinsic motivation and heightened family PA levels suggesting the importance of family PA as a catalyst in improving motivation and healthy behaviours surrounding exercise (Burgueno et al., 2020).

On top of healthy exercise behaviours, family PA has been linked to improved family dynamics (Thompson et al., 2010). To illustrate, a qualitative study conducted by Thompson et al. (2010) asked parents their perceived importance of physical activity in improving family relations. These individuals concluded that conducting PA together saw numerous benefits including improved parent-child communication, enjoyment, enhanced emotional wellbeing and increased time together (Thompson et al., 2010). Notably, spending time together was cited as one of the most significant aspects of family PA. The 2016 census of the West Point Grey area shows that 46.2% of families work in the city or outside of the home. As well, 15.2% of homes are single parent households while 18.4% of homes are regarded as low income (“Statistics Canada”, 2016). All this data suggests that the time parents do get with their children is very scarce due to the incredible amount of time parents spend working and providing for their families. Thompson’s study addresses this barrier, for many study participants allude to the presence of only one parent being available to partake in PA due to the complexity and busyness of family lifestyles. Thus, suggesting that most family PA occurs on the weekend when parents on average have more time to interact with

their family (Thompson et al., 2010). Overall, this study and the census bring to light the idea of family PA is extremely important for family wellbeing but is often restricted by lack of time.

With all things considered, the research above has conveyed the influence both parents and guardians have on the physical activity levels of their youth. The studies cover a broad age range from as low as 3 years old up to 18 years old. While the studies ask if children and youth are active, and whether or not they are active with parents, or whether parents are supportive of children and youth activity, there is a gap to addressing what parents require to enable family PA. There is a considerable amount of research showing that children and youth are not active enough and also what type of activities active youth do participate in when they are active, however, parents aren't asked what specifically they need to implement more family PA. Considering this gap, that will be addressed in this study, the question becomes: What do families need to increase family PA within the UBC community?

An opportunity of promoting family PA seems probable within UBC's recreational programming. Currently, UBC REC has some programs for youth camps and some family swimming and family hockey programs. With the addition of a family recreational physical activity program some of the needs of family PA could be met. The goals of this program's proposal are to provide a family recreational program that would appeal to the UBC community's families, as well as improve the healthy lifestyles of these participating individuals. In particular, UBC campus is a superb location to hold this program. UBC presents a safe and recreation rich area that may suggest increased levels of participation (van Loon et al., 2014). For instance, a Vancouver area research project by van Loon et al. (2014) looked at the role of neighbourhood environments as it correlates with MVPA participation. The study found that neighbourhoods that included parks were positively associated with

increased childhood activity levels. In general, the literature suggests that a UBC REC program that is being offered nearest to UBC families could be a considerable feature of maintaining and increasing youth MVPA within the West Point Grey and UBC area. Therefore, the purpose of this program proposal is to incorporate a solution to the absence of a UBC REC family program and accentuate the importance of family PA, healthy exercise behaviours and family relations by looking at the self-identified barriers that prevent parents from participating in PA with their children.

Methods

Rationale

This research study will attempt to gain insight into the absence of family driven physical activity (PA) programs in the UBC area by assessing the wants and needs of parents for their child's PA. The evidence acquired in this study will assist in facilitating the development of a family recreational program that appeals to the UBC community families. The research will accomplish this goal by incorporating the Health Belief Model (HBM) as its guiding framework.

Target Population

The target audience of this study are parents of UBC residential families and other families that are partaking, or would consider partaking, in UBC REC programs. The rationale behind utilizing this population is that these parents are perceived to be the most likely cohort to participate in UBC recreational facilities. Inclusion criteria ideally consists of families that live on UBC campus or the UBC endowment lands with children ages 3-12. These ages are suggested to be the most crucial time for parent involved child development (Gustafson et al, 2012). Families that do not live on campus but use UBC recreational facilities are also eligible for the study. Parents that have children above or below this age

threshold will be excluded from the survey. Furthermore, the initial questions of the survey aim to remove individuals that do not fit into the inclusion criteria. Most notably, parents that are actively involved in the “UBC families” Facebook group, with 5.7 thousand members, will be the targeted cohort. By allowing a large population access to the survey, the study has a higher probability of acquiring participants (Israel, 1992). Overall, this study contains a relatively broad target population. However, this survey is designed to reach a large number of participants in a relatively short amount of time. In sum, this population is targeted for its potentially strong correlation to UBC family recreation. Collecting data from this cohort will aid in creating a family recreational program that is user centered.

Data Collection Methodology

The reason a survey is the chosen method of data collection is because of its cost efficiency and time effectiveness for the parameters of the study (Jones et al. 2013; Wacławski, 2012). This format also allows the study to obtain results from a larger population without the extra steps of an interview method (Jones et al. 2013). The study will involve a mixed methods survey consisting of non-invasive qualitative and quantitative portions. The questions will be presented as multiple-choice, multiple-answer, and short answers, to allow the participants to express their distinct opinions without the constraints of close-ended questions.

Applied Theory

The HBM theory has been incorporated into survey questions to better encompass participant health behaviours. The HBM concepts involve perceived susceptibility, severity, cost, and barriers, as well as cues to action and self-efficacy (Jones et.al., 2015). Although this model has been used discretely for diagnostics of illnesses in the past, the implementation of the two later concepts (cues to action and self-efficacy) has adapted this

theory to help make inferences about health behaviours and interventions (Jones et al., 2015). In particular, the health behaviours being analysed will involve PA within the context of family recreation. In regard to the survey, each concept listed above will be incorporated into both theory driven questions, and application questions. In other words, a question will involve either a theory-based concept by asking the participant their thoughts surrounding the idea. While some questions take an application approach, for instance asking what could be done to reduce the limitations within a core concept. By conducting the survey in this format, the study can collect data on what participants want to see change based on their previous experiences within recreation. For example, one portion of the survey will analyze the perceived barriers associated with family recreation. Thus, the following question will address what would limit the barriers associated with this form of recreation. This current research study relies heavily on participant feedback as a way of providing evidence to promote overall recreational change. Therefore, by collecting participants current thoughts of family driven recreation and what they would like to see change, this study should provide the needed insight to change family recreation parameters, thereby increasing family recreation participation in the UBC area.

Survey Questions

The first four questions of the survey aim to confirm if participants are eligible for the survey by placing questions that focus on the inclusion/exclusion criteria. No questions regarding personal information will be asked to provide additional privacy and confidentiality to the participants. Questions within the survey will consist of the six key concepts derived from the HBM. These questions set the foundation of incorporating the concepts and relate back to the previously stated goal of the research study.

After the inclusion/exclusion criteria, the remaining questions will be used to guide the participants through the six concepts. For “Perceived Susceptibility,” questions are

centred around the benefits of a family centred recreation program and questions that encourage participants to acknowledge what they would gain from partaking in these types of programs (Jones et.al., 2015). Questions focused on the shift to COVID-19 regulations have also been put in place to accommodate with the current health crisis. “Cues to Action” questions will assess the willingness of participants to take action in signing up or engaging in family recreation (Jones et.al., 2015). While “Perceived Barriers” will ask participants to describe any potential barriers that they see when attempting to partake in family recreation (Jones et.al., 2015). This concept may be the most important as it uncovers the most common obstacles that prevent families from being more physically active together. “Perceived Severity” questions will acknowledge the predetermined risks associated with a family recreation program, specifically focusing on risks central to the individuals within a family (Jones et.al., 2015). For example, a child that is able-bodied will have less risks than a person with a disability when participating in a PA program. “Perceived Cost/Benefit” refers to the participants beliefs towards the pre-existing costs involved in family PA programs Jones et. al., 2015). For example, taking into account the parents previous experience with paying for all aspects of recreation such as: travel costs, equipment, and registration. “Self-Efficacy” questions will evaluate the confidence associated with performing family recreation, and the question gauges the participants motivation in engaging in PA behaviors (Jones et.al., 2015). Once the survey is completed, all answers will be saved to the Qualtrics database and then later transferred to an excel spreadsheet to comprehensively look for similarities.

Distribution of Surveys

Once the proposal was approved, in mid-March 2021, the survey was posted in the “UBC Families” Facebook group with the assumption that parents would be eager to partake in the study for the betterment of their family’s health behaviours. The survey was displayed in the Facebook group with a social media recruitment form (Refer to Appendix). The

recruitment was refreshed every few days to prompt additional responses. The survey was posted to additional Facebook groups in an attempt to boost response rates after the first week when responses plateaued. When accessing the survey, the landing page consisted of a consent form that details the specifics of the study. Rather than requiring a signature, this survey will allow participants to press an “accept button” equivalent to their written consent, allowing their data to be used. Survey collection was ended on March 28th, 2021 although only 32 of the targeted 40 responses were met.

Analysis of the Data

The study then moved onto its second phase where researchers analysed the recorded data through a trend analysis of the participant’s short answers as well as a statistical analysis of the multiple choice and multiple answer questions. For the short answer, texts were compiled into an excel spreadsheet and grouped into common trends. A comprehensive list of participant preconceived barriers was highlighted as well as individualized thoughts on improving aspects of family recreation. The most heavily conversed answers were put at the top of the excel sheet followed by additional answers in descending order of prevalence. Data was grouped into the six concepts described earlier in the document allowing researchers to easily assess the data accordingly. Following this step, the survey questions that require statistical analysis were analysed using JASP software. With the newly sorted data, the study’s organizers created a proposal for a family recreation program design that incorporated direct input from the survey respondents., The program design also addresses recreational concepts that are currently inefficient and/or possibly outdated. Overall, this study is formatted to get direct input from the community users by using text input questions to obtain participant’s individual comments. By understanding this cohort’s notion surrounding family recreation on the UBC campus, this study should uncover the desires and changes parents uphold to see increases in family centred participation within the UBC area.

Research Findings

The studies' final sample included 32 UBC parents that were part of the popular UBC Facebook group chat. This was achieved through the blocking questions that narrowed the requirements for accessing the survey.

Table 1

Barriers

Barrier	Frequenc y	Percent	Valid Percent	Cumulative Percent
Program Availability	3	10.345	10.345	10.345
Cost	3	10.345	10.345	20.690
Parking	1	3.448	3.448	24.138
Social distancing	3	10.345	10.345	34.483
Time of activity	12	41.379	41.379	75.862
Time off work	3	10.345	10.345	86.207
Activity types	2	6.897	6.897	93.103
Age Range	2	6.897	6.897	100.000
Missing	0	0.000		
Total	29	100.00 0		

The perceived barriers question observed 12 participants suggesting time of activity was the biggest perceived barrier while issues with parking were deemed as the least common response.

Table 2

Likelihood of Engaging in UBC REC programs

Likelihood of Engaging	Frequenc y	Percent	Valid Percent	Cumulative Percent
I do not feel safe to engage	8	32.000	32.000	32.000
I would engage by myself	1	4.000	4.000	36.000
I would engage with my family	16	64.000	64.000	100.000
Missing	0	0.000		
Total	25	100.000		

The question regarding the likelihood of engaging in a UBC REC program saw a majority of participants conveying their comfort and safety with engaging in a REC program during the pandemic.

Table 3

Ideal programs to choose from

Program type	Frequenc y	Percent	Valid Percent	Cumulative Percent
Badminton	2	5.405	5.405	5.405
Ball sports (soccer, basketball, tennis etc.)	6	16.216	16.216	21.622

Dance	3	8.108	8.108	29.730
Gymnastics	3	8.108	8.108	37.838
Multisport	3	8.108	8.108	45.946
Outdoor activities (walking, hiking, running)	8	21.622	21.622	67.568
Parkour/obstacle courses	5	13.514	13.514	81.081
Physical literacy	2	5.405	5.405	86.486
Swimming	2	5.405	5.405	91.892
Yoga	3	8.108	8.108	100.000
Missing	0	0.000		
Total	37	100.00	0	

Table 3 describes the participant recommended activities that a future UBC REC program could incorporate. The most common stated activity was outdoor activities such as walking, hiking and running. These responses were closely followed by a liking towards ball sports (i.e. soccer, basketball, tennis)

Table 4

Ideal Cost type for UBC Family REC programs

Cost type	Frequenc	Percent	Valid	Cumulative
	y		Percent	Percent
One cost for whole family	15	57.692	57.692	57.692

Per person charge	11	42.308	42.308	100.000
Missing	0	0.000		
Total	26	100.00	0	

Responses from this question on ideal costs showed 15 participants desired a one cost per family approach while 11 participants voted for a per person charge.

Table 5

Ideal Length of the classes

Time	Frequenc y	Percent	Valid Percent	Cumulative Percent
1 hour	12	48.000	48.000	48.000
30 minutes	2	8.000	8.000	56.000
45 minutes	11	44.000	44.000	100.000
Missing	0	0.000		
Total	25	100.00	0	

This length of class survey question developed 12 responses that preferred one hour programs, 2 preferring 30 minute programs, and 11 selecting 45 minute at a time programs.

Table 6

Confidence in abilities to promote healthy behaviours in a family setting

Confidence in ability to promote healthy behaviours	Frequenc y	Percent	Valid Percent	Cumulative Percent
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Not confident	1	3.846	3.846	3.846
Very confident	14	53.846	53.846	57.692
moderately confident	11	42.308	42.308	100.000
Missing	0	0.000		
Total	26	100.00	0	

14 participants were very confident in promoting healthy behaviours in a family setting. While 11 stated being moderately confident with one feeling a lack of confidence.

Table 7

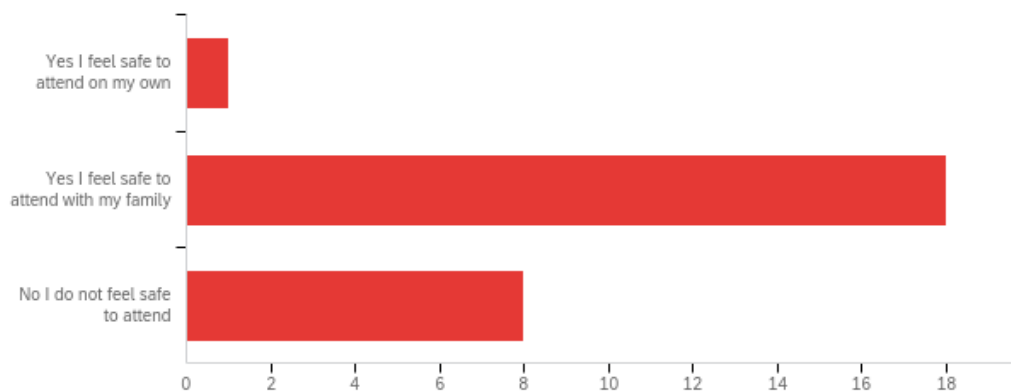
Attendance

Frequency	Frequenc y	Percent	Valid Percent	Cumulative Percent
Bi-weekly	2	8.333	8.333	8.333
Twice a week	3	12.500	12.500	20.833
Weekly	19	79.167	79.167	100.000
Missing	0	0.000		
Total	24	100.00	0	

Attendance responses saw 19 participants select a weekly frequency of a program. Three responded twice a week and two voted bi-weekly.

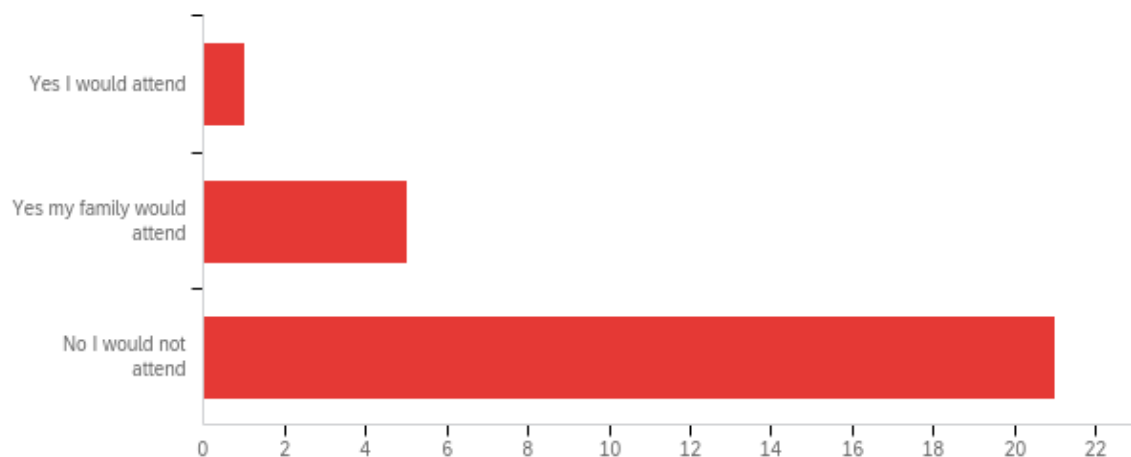
Figure 1

Feelings of Safety to attend a UBC REC program during the pandemic



Relative safety to attend a UBC REC program saw 18 participants claiming they feel safe for their family to attend, 8 did not feel safe attending while 1 participant said they only felt safe when attending on their own.

Figure 2
Likelihood of attending an online UBC REC program



The question addresses the likelihood of attending an online oriented UBC REC Program saw 21 participants stating they would not attend, 5 suggesting they would attend with their family, and 1 participant conveying they would only attend by themselves.

Discussion

Current literature focuses on if youth aren't active but doesn't address the what and how of parent's needs in order for them to improve family PA, or what community interventions are needed. The aim of this study was to accumulate applicable research by surveying UBC families and using that data to propose a family-oriented recreational

program to UBC REC. Involving the end users' experience and opinions provides the needed information to develop solutions to create a new program. As a result, this survey focused on self-identified barriers that parents believe contribute to an absence of their own family PA. Hence, if we collect data on the barriers that are present, we can identify solutions that tailor to these problems. Overall, the collected data derived descriptively significant results that suggest attention and reform to these barriers in the following paragraphs.

In terms of findings, the survey provided information which addressed each of the six health belief model constructs. Foremost, the perceived barriers suggested by participants brought to light the potentially strongest limiting factors of family PA participation. Interestingly, "Timing of the activity" was seen as the most influential factor in determining the amount of family PA (Refer to Table 1). Understandable, as stated in the literature above, lack of time is a crucial indicator of limited family driven PA. Parents are regularly pressured with work commitments that reduce their free time ("Statistics Canada", 2016). Furthermore, the survey uncovered participant perceived susceptibility through the question addressing "likelihood of engaging in a UBC program". This survey question revealed that the majority of families are willing to engage in a UBC REC program given the right circumstances (Refer to Table 2). Conveying the willingness to partake in a newly implemented physical activity program. Perceived cost was also discovered with the survey question designed around "ideal cost". The data pertaining to this question conveyed that the majority of families appreciate the "one cost per family" method while a small portion voted for a "pay by person." Inferring that parents could be more willing to bring their whole family to a program if it means the relative cost is less (Refer to Table 4). Furthermore, the survey addressed the perceived severity with the current pandemic. Seeing a strong correlation between the degree of perceived safety and willingness to partake in a REC program. 18 out of 27 participants suggested they feel relatively safe attending a UBC REC event. While only

8 of the 27 felt uncomfortable doing so (Figure 1). This information suggests that there could be interests towards a program amidst the COVID-19 pandemic and an otherwise increased participation rate than previous programs. Self-efficacy was also highlighted in the “Confidence in abilities question”. Participants were seen as being equally “very confident” or “moderately confident” in promoting healthy behaviours in the family setting (Refer to Table 6). In addition, the survey also took into account the willingness to partake in an online driven UBC REC program. However, data retrieved from this question showed an overall disinterest in attending an online class during the pandemic (Figure 2). Possible reasons suggest that an online class would not be worth the cost of registration. Inferring that in-person programs best suit the participants of this study. Subjects also conveyed the worry of their children not liking or benefiting from the programs. Overall, the relation between cost and perceived benefit played an essential role in the responses of these parents. Finally, one of the most important questions in this survey sought out parents’ desires towards type of physical activity (Refer to Table 3). Most requested activities were outdoor activities and ball sports. The answers from this question plays a huge role in the recommendations to our partners as its one of the final steps in developing a solution

Overall, uncovering the fallacies and barriers parents see when attempting family PA could place a different focus on future literature. As highlighted in KIN 464 Health Promotion, informing the general population of how poor health behaviours affect individuals hasn’t been an effective route to behaviour change. So, by first understanding the barriers associated with a change we can develop customized solutions to improve these behaviours and societal barriers head on. Therefore, conducting more research into the barriers associated with family PA rather than the rates of participation, we can create solutions that can be implemented by institutions and used to formulate policies.

Limitations

There is limited statistical data in this area of research. Most studies consist of descriptive analysis which could suggest more subjective than objective findings among the studies which could possibly convey skewed results. Relying on those results to inform this study could further skew the results in a subjective direction. If those other studies are individualized and lack commonalities then this studies research may be similarly skewed. Furthermore, the applied theory in the creation of the survey (Health Belief Model) may have been an inadequate method of formulating the questions. This theory was first constructed and used as a diagnostic framework which doesn't particularly align with the goals of this research. A substitute theory much like the "Theory of Planned behaviour" could have been a stronger alternative as it takes into account individual autonomy and behaviours out of our control (Bundon, 2021). This theory lens could better aid in understanding the relationship between family and physical activity. Another limitation in this study is seen in some participants suggesting the questions don't strongly evoke responses. In other words, the questions could've been worded differently. Questions should be worded in a way that doesn't bias a certain decision or answer. Conducting the questions in this way presents favourable data to proving the hypothesis. In addition, creating questions that limit the use of academic wording to appeal to the general population should be taken into consideration. The use of "perceived barriers" as a term could have been replaced with easily comprehensible terms like "problems" or "obstacles". The desire of some of the respondents to give nuanced answers suggests that follow-up interviews may have been beneficial to gain more insight into family barriers and needs. One of the biggest limitations in this study was lack of participant data. This survey received 32 of our goal of 40 survey responses. Which heightens the lack of validity and strength of this research. With a lack of participant engagement, this study cannot claim to represent certain cohorts. Participant attrition also played a notable role

in lack of engagement. This could convey back to the previous limitation of creating more engaging unbiased questions that encourage answers increased participation. To add, initially only targeting one very large and active Facebook group sounded feasible in achieving 40 UBC family responses, however the survey did not reach the adequate response number. Late attempts to reach other groups did not boost the number of responses significantly. The need to expand the advertising to other areas of the internet is a possible solution that this study could have utilized. As well, direct advertising in the UBC REC centre, on UBC notice boards, and local day care and elementary schools could have been utilized, if not for pandemic restrictions to access. Furthermore, this survey assumably did not reach the target populations that are in need of more physical activity regiments. Rather, eager parents that were already motivated to engage their child(ren) in PA were the ones who signed up for the survey. Therefore, a huge cohort of potential UBC clients are absent from the study. Further research into how to access this cohort is needed. Time constraints of the survey also hindered the data collection process. The survey was distributed for less than a month with limited points of access making it very difficult to obtain responses. Finally, another limitation to question is the current social and economic situation. Due to COVID-19, families have relatively changed their way of life through: income, parents' time at home, safety precautions, etc. Suggesting that this current state doesn't translate to 'normal' pre-COVID standards of living and that this research must be used with caution as it's not an accurate representation of long-term parent responses.

Recommendations

The data obtained, even with its limitations, pointed in a direction to make recommendations to UBC REC:

1. Weekends and weeknight availability are deemed the best options in terms of family availability. This takes into account parent working schedules, youth schooling and family busy schedules.
2. Giving options for level of commitment for the activity. For instance, cost pay per session, drop-in sessions and pay once per family. Currently both Hockey and Swimming programs have already been implemented and they both use the drop in payment option. This reinforces the idea of implementing other activities with the same payment options to play to the families availability.
3. With spring and summer months approaching, the implementation of an outside activity program could be a viable option (i.e. parkour, family nature walks, Jump rope, pedal heads, soccer). This option also is preferred for its heightened Covid safety measures and the preference for being outside. This recommendation was developed from the “type of activity” and “fear of covid” questions. These questions stated that both outdoor activities are a preferred program choice and that Covid still prevents many families from partaking in programs. Making the program as safe as possible could improve participation rates.
4. Physical activity (PA) workshops for parents, to improve their self-directed PA with their kids. This recommendation is derived from the self-efficacy question which addresses relative confidence with delivering healthy behaviours in the household. Some parents conveyed that they lacked the self-confidence to promote these actions so a workout that gives parents the tools and information to promote PA could see beneficial results.

In terms of further areas of study, the limitations above provided some areas for further or more refined research. Another area to investigate would be the potential overlap between children’s declining PA and the decline of unsupervised outdoor play. Are the first

generations of parents who grew up with restrictions on outdoor play passing a fear of unsupervised outdoor play and subsequent lack of daily physical activity on to their children?

In turn, possibly promoting a decrease in child mobility?

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Appendices

Social Media Recruitment Form



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

**Are you a parent with access to UBC
REC programs we would love to speak
with you!**

As part of a course-based research project (KIN 464), we are conducting a study on the barriers of developing a UBC REC family programs. If you are a parent of children age 3-12 and have access to UBC REC programs we would love to hear from you/for you to complete a survey. More information

**<https://kin.educ.ubc.ca/research/research-subject-recruitment/> or email
emfelds0@gmail.com.**

Please note that this post is public and anyone who likes, comments or shares the link will, by doing so, be associated with the study. The Principal Investigator on this project is Dr. Andrea Bundon (andrea.bundon@ubc.ca).

Qualtrics Survey:

Q1 Thank you for agreeing to take our survey on UBC REC Programming for Families.
Please take a moment to read the following consent form.



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

Participant Consent Form

Identifying and Addressing Barriers That Have Resulted in a Lack of UBC REC Family Physical Activity Programs Group 6

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

The purpose of the class project: To gather knowledge and expertise from community members on the type of family physical activity programs they feel are needed and wanted for their families that should be offered and facilitated by UBC REC.

Study Procedures: With your permission, we are asking you to participate in a survey. You may only complete the survey once. With the information gathered, students will critically examine how different individuals understand or engage in health promoting activities or health promotion initiatives.

Project outcomes: The information gathered will be part of a written report for the class project. The written report will be shared with campus partners involved with the project. Summaries of findings will also be posted on the following websites. *No personal information/information that could identify participants will be included in these reports or shared with campus partners.*

UBC SEEDS Program Library: <https://sustain.ubc.ca/courses-degrees/alternative-credit-options/seeds-sustainability-program/seeds-sustainability-library>

Potential benefits of class project: There are no explicit benefits to you by taking part in this class project. However, the survey will provide you with the opportunity to voice your opinion on your experiences with health promoting activities or initiatives in a broad sense and will provide the students with an opportunity to learn from your experiences.

Confidentiality: Maintaining the confidentiality of the participants involved in the research is paramount, and no names of participants will be collected. At the completion of the course, all data (i.e. notes) and signed consent forms will be stored on a secure electronic drive by Dr. Bundon. All data and consent forms will be destroyed 1 year after completion of the course.

Risks: The risks associated with participating in this research are minimal. There are no known physical, economic, or social risks associated with participation in this study. You should know that your participation is completely voluntary and you are free to **withdraw from the study** and there will not be negative impacts related to your withdrawal. If you withdraw from the study, all of the information you have shared up until that point will be destroyed.

Contact for information about the study: If you have any questions about this class project, you can contact 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 . or call toll free 1-877-822-8598.

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

February 22, 2021

Project ID: H17-03560

Q2

Do you consent to completing the following survey with the data collected to be used by the UBC students collecting the data?

☐ Yes (24)

☐ No (25)

Q3 Do you live in an area where you can access/use a UBC family REC program?

☐ Yes (1)

☐ No (2)

Q4 Would you join a family-based physical activity program if offered by UBC REC?

☐ Yes (1)

☐ No. Why not? (2) _____

Q5 Do you think having a UBC REC family based physical activity program would be beneficial?

☐ Yes (4)

☐ No (5)

Q6 Would you feel safe attending an in person UBC REC program with COVID-19 present?

☐ Yes I feel safe to attend on my own (1)

☐ Yes I feel safe to attend with my family (2)

☐ No I do not feel safe to attend (3)

Q7 Would you be likely to attend a virtual (online) UBC REC program during Covid-19?

☐ Yes I would attend (1)

☐ Yes my family would attend (2)

☐ No I would not attend (3)

Q8 If a family based physical activity program was available for September 2021, how likely are you to enroll your family?

☐ Extremely likely (1)

☐ Somewhat likely (2)

☐ Neither likely nor unlikely (3)

☐ Somewhat unlikely (4)

☐ Extremely unlikely (5)

Q9 What ages would you like to see physical activities planned for? Check all that apply.

☐

Preschool: aged 3 - 5 years old (1)

☐

Early primary school: aged 6 - 9 years old (2)

☐

Later primary school: aged 10 - 12 years old (3)

Q10 What are some perceived barriers (ie time off work, cost, availability) you might face when participating in a family based physical activity program?

Q11 What are some ways that you feel these barriers could be reduced?

Q12 Do you perceive any risks (specific to your family) associated with partaking in a family based physical activity program? (i.e. pre-existing injuries or limiting abilities)

Q13 What cost structure would you like to see for a family program?

☐ One cost for whole family (1)

☐ A per person charge (2)

Q14 Which time(s) do you feel would work best for such a program? Check all that apply.

☐ Weekdays 9am to 3pm (1)

☐ Afterschool 3:30pm to 6pm (2)

☐ Evening 6pm to 8pm (3)

☐ Weekends (4)

☐ None at all (5)

Q15 How confident are you in your ability to motivate and promote healthy behaviors within your family?

☐ Very confident (1)

☐ Moderately confident (2)

☐ Not confident (3)

Q17 How often would your family attend a program?

- ☐ Twice a week (1)
- ☐ Weekly (2)
- ☐ Bi-Weekly (3)
- ☐ Other (4) _____

Q18 How long should a program session last?

- ☐ 30 minutes (1)
- ☐ 45 minutes (2)
- ☐ 1 hour (3)
- ☐ 90 minutes (4)
- ☐ Other (5) _____

Q16 What types of family based physical activity programs would you like to see UBC REC create for families?

Q19 Do you have any additional comments?
