

**Evaluation of the Capacity Building Model for the Tremplin Santé Program:
A Mixed Methods Study**

**by
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Author's Declaration

I hereby declare that I am the sole author of this thesis. This is a true copy of the thesis, including any required final revisions, as accepted by my examiners.

I understand that my thesis may be electronically available to the public.

Abstract

Introduction: Fewer than 1 in 5 Canadian children/youth met national guidelines for physical activity and sedentary behaviours in 2022 (ParticipAction, 2022). Summer camp environments provide a structured opportunity for children and youth outside of a school-setting to meet these guidelines and can foster emotional intelligence and independence, builds social skills and develops resiliency and confidence. Currently in Canada, there is no clear approach for summer day camps to follow that would serve to maximize the potential benefits that the camp experience has to offer camp staff and campers. Power Up is an intervention that aims to support the development of environments that are conducive to the promotion of healthy habits through the training and tools they offer to participating camps. The purpose of this research study is to evaluate: (1) how camp staff (administrators, coordinators and counsellors) implement the activities promoted by Power Up in summer day camps and (2) how the training and supports provided by La Fondation Tremplin Santé shape the environment of the camps through the leadership of counsellors and the physical activity of campers.

Methods: This study involves mixed methods including interviews and structured observations in the camps. Semi-structured interviews were conducted with camp administrators, coordinators and counsellors to understand how they implemented the intervention in the camp setting. This study also included observations using two validated time-sampling tools: System for Observing Play and Leisure Activity in Youth (SOPLAY) and System for Observing Staff Promotion of Activity and Nutrition (SOSPAN) for assessing physical activity and promotion of healthy behaviours by counsellors.

Results: The results of the direct observations and interview themes indicate that the training and resources provided by Power Up supported camp staff in the promotion of healthy habits and shaped the camp environment in a positive direction. Through the Power Up training, camp staff were able to learn and familiarize themselves with the available tools and resources to help with daily activity programming. However, there are challenges and barriers to implementing the Power Up intervention that requires further research.

Conclusion: These results of this study will inform an understanding of program implementation and the way camp environments support physical activity and healthy eating in campers and counsellors for insight into program outcomes. This information will assist La Fondation

Tremplin Santé in future iterations of the program and add to growing evidence regarding capacity building interventions to enhance healthy habits.

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Table of Contents

Author’s Declaration	ii
Abstract.....	iii
Acknowledgements	v
List of Tables	viii
List of Figures.....	ix
List of Abbreviations	x
1. Introduction.....	1
1.1 Description of the Power Up program	1
2. Literature Review	5
2.1 Health Behaviours and National Guidelines	5
2.2 Staff Promotion and Habits among Children	6
2.3 The Importance of Role Models for Youth.....	6
2.4 Capacity Building in Counsellors through Training.....	8
2.5 The Gaps in Summer Camp Research.....	10
3. Methodology	12
3.1 Study Design	13
3.2 Qualitative Data Collection.....	14
3.3 Quantitative Data Collection	14
Observation Instrumentation	15
SOPLAY – Systematic Observation of Physical and Leisure Activity in Youth.....	15
SOSPAN – System for Observing Staff Promotion of Activity and Nutrition	19
Research Staff Training for SOPLAY and SOSPAN Observations.....	20
Guiding Protocol and Procedures	20
3.4 Data Analyses	21
4. Results	24
4.1 Interview Results	24
Theme #1: Rationale for Participating in Power Up	24
Theme #2: Supports provided from Power Up.....	28
Theme #3: Benefits of Power Up at the Camp Level.....	32
Theme #4: Challenges with Power Up Implementation.....	38
Theme #5: Recommendations for the Power Up program	45

4.2 Observational Results	49
4.2.1 SOPLAY Results	50
Camp Environment	50
Camper PA Engagement Across Three Evaluation Years.....	52
Supplementary Analysis 1: Camper PA Engagement by Activity Type in 2023 ...	59
Supplementary Analysis 2: Camper PA Engagement by Staff Engagement	62
4.2.2 SOSPAN Results	66
Staff PA Management.....	66
Staff PA behaviours.....	69
Staff HE Behaviours (Nutrition & Food Handling).....	71
4.2.3 Reliability	72
5. Discussion	73
5.1 Research Question #1: Implementation of Power Up on Camp Programming ...	73
5.2 Research Question #2: Influence of Training and Supports from TS on the Camp Environment	76
5.3 Recommendations	80
5.3.1 Recommendations for Future Research	80
5.3.2 Recommendations for the Power Up training	82
5.3.3 Recommendations for Implementing the Power Up Program	83
5.4 Strengths and Limitations	87
6. Conclusion	89
References	90
Appendices	97
Appendix A: Power Up Program Overview Infographics	97
Appendix B: Camp Staff Recruitment Email	99
Appendix C: Camp Staff Interview Letter of Intent	100
Appendix D: Camp Staff Interview Consent Form	102
Appendix E: Camp Staff Interview Guide	104
Appendix F: Camp Staff Interview Follow-up Letter	109
Appendix G: Power Up Evaluation – Observation Operation Definitions	110
Appendix H: Power Up Evaluation – Activity Observation Worksheet	112
Appendix I: Power Up Evaluation – Lunch Observation Worksheet	113
Appendix J: Power Up Evaluation – Interrater Agreement Tables	114

List of Figures

Figure 1.	Timeline of Summer Day Camp Evaluation Visits (2021, 2022 and 2023)	6
Figure 2.	SOPLAY Camper Physical Activity Observations Visualization – BOYS	55
Figure 3.	SOPLAY Camper Physical Activity Observations Visualized – GIRLS	56
Figure 4.	SOPLAY Camper Physical Activity Observations – By Observation Period and Activity Levels (Boys & Girls Combined)	58
Figure 5.	SOPLAY Camper Physical Activity Observations – By Observation Period and Activity Levels (Boys Only)	59
Figure 6.	SOPLAY Camper Physical Activity Observations – By Observation Period and Activity Levels (Girls Only)	60
Figure 7.	Camper Physical Activity Observations (2023) – By Activity Type (Boys and Girls)	63
Figure 8.	Camper Physical Activity Observations – By Staff Engagement (2021)	66
Figure 9.	Camper Physical Activity Observations – By Staff Engagement (2022)	67
Figure 10.	Camper Physical Activity Observations – By Staff Engagement (2023)	68

List of Tables

Table 1.	Location & Number of Participating Camps	51
Table 2.	Number of SOPLAY and SOSPAN Activity Observations	51
Table 3.	SOPLAY Physical Activity Camp Environment Area Observations	52
Table 4.	Camp Food Environment Observations	53
Table 5.	SOPLAY Camper Physical Activity Observations – BOYS	54
Table 6.	SOPLAY Camper Physical Activity Observations – GIRLS	55
Table 7.	Camper Physical Activity Observations (2023) – By Activity Type (Boys and Girls)	62
Table 8.	Camper Physical Activity Observations – By Staff Engagement (All 3 Evaluation Years)	65
Table 9.	SOSPAN Camp Staff Physical Activity Management Observations	70
Table 10.	SOSPAN Camp Staff Physical Activity Behaviours Observations	72
Table 11.	SOSPAN Camp Staff Nutrition Behaviours & Food Handling Observations	74
Table 12.	Interrater Agreement Summary (2021 Evaluation Summer)	110
Table 13.	Interrater Agreement Summary (2022 Evaluation Summer)	110
Table 14.	Interrater Agreement Summary (2023 Evaluation Summer)	110

List of Abbreviations

TS – La Fondation Tremplin Santé

HE – Healthy Eating

PA – Physical Activity

MVPA – moderate-to-vigorous physical activity

SOPLAY – System for Observing Play and Leisure Activity in Youth

SOSPAN – System for Observing Staff Promotion of Activity and Nutrition

1. Introduction and Background

Camps foster development of positive social and behavioural outcomes attributable to the camp experience such as perseverance, independence, responsibility, and the appreciation of self and differences among others (Richmond et. al, 2019). Camps model themselves and focus on a plethora of learning landscapes including but not limited to physical activity, sports, social skills, healthy eating behaviours, arts and music, religion and nature (Richmond et. al, 2019). The Canadian Camping Association, a non-profit, national federation of nine provincial camping associations representing over 800 camps across Canada offers guidelines, tools, resources for programming related to camper care and illustrates the importance of the camp experience as a primary learning environment (Canadian Camping Association, 2018). However, there are no clear strategies outlined that summer day camps can follow or utilize to maximize staff engagement and behaviours meant to take advantage of the wide range of possible benefits the camp environment has to offer for children and youth.

1.1 Description of the Power Up program

Power Up is a flexible and adaptive intervention that provides training, consultation and tools to camp staff to support physically active and healthy eating habits at summer camps. As a charitable organization, its mission is to support and promote the development of recreational environments that are conducive to the maintenance of healthy lifestyle behaviours among children and youth in Canada (Tremplin Santé, 2023). The program was created by La Fondation Tremplin Santé (TS) and consists of a team of specialists including kinesiologists and nutritionists who support the intervention and its capacity-building model.

Power Up is a free program focused on developing and strengthening the skills, resources and behaviours of camp staff to support a healthy eating (HE) and physical activity (PA) environment in the camp setting (Tremplin Santé, 2023). Before the official start of the summer day camps, TS offers training to administrators (and higher-level camp staff) in the form of a yearly virtual Power Up summit meeting. The Power Up summit is a yearly three-hour long workshop designed to help administrators integrate healthy habits into their organization and member camp(s). It incorporates discussion periods, features special guests and covers training material with a dynamic and interactive approach. In 2022, the Power Up Summits hosted approximately 145 administrators (and higher-level camp staff) from 88 different camps

(Tremplin Santé, 2023). The summit also serves to introduce the intervention and how to access its resources to administrators (and higher-level camp staff), where it is then their responsibility to relay this information to their own camp staff during their individual camp training sessions.

The coordinators and counsellors are offered Power Up training in the form of online webinars and virtual workshops. There are two training workshops; one is a short team-building escape room activity and the other is called ExplorAction, which is a one-hour, experience-based training that consists of a complex list of core and advanced training modules that covers specific topics such as programming physical activities, inclusion at the camp setting, body diversity and presenting healthy habits to name a few. The ExplorAction workshop is the only available before the start of camps as TS allocates specific date and times for these training sessions (typically two sessions are made available at the end of May and the beginning of June each year). There are also four unique webinars, up to 30 minutes each in length that present staff with challenges that they may encounter in the camp setting. For most camps, the training of coordinators and counsellors typically happens before the start of camp. However, this is largely dependant on the schedule of the individual camps and based on when the administrators (and higher-level camp staff) decide to train their staff about the Power Up program materials. These webinars and the escape room workshop are considered ongoing training elements and can be accessed anytime before, or after the start of the summer day camp period as well as throughout the summer.

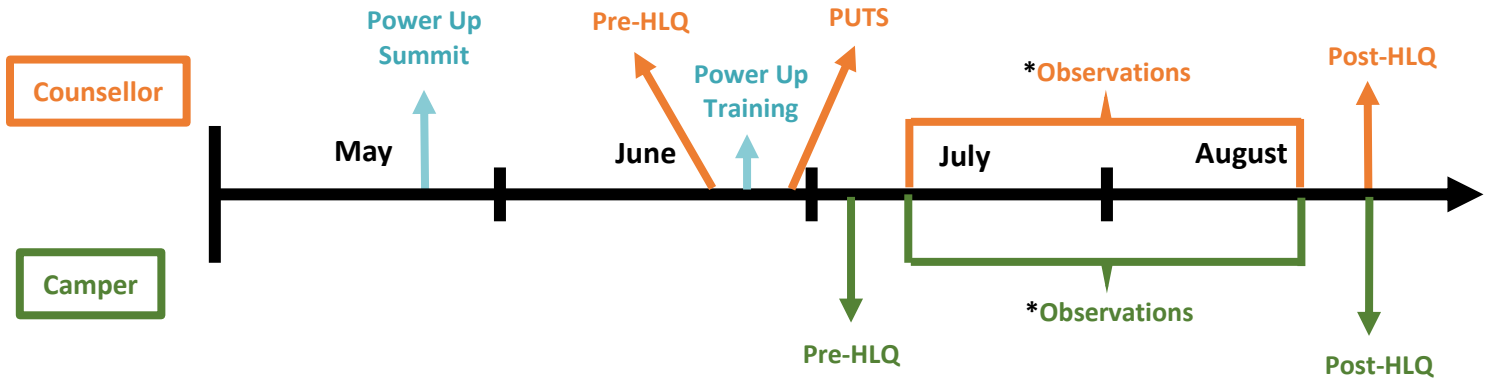
TS provides 180 games, activities and tools, over 150 HE recipes, access to more than 60 videos to assist with activity planning and personalized support available directly from health experts as part of their program to participating camps. Additionally, participating camps can engage in challenges and contests to motivate counsellors and campers to participate in activities in the development of healthy habits led by TS (Tremplin Santé, 2023). See the Infographic in Appendix A for more information about the intervention.

As of 2022, Power Up has reached 986 camps and youth organizations that participate in the Power Up intervention, with nearly 15,000 counsellors and 208,000 children and youth (Tremplin Santé, 2023). Originally founded in 2012 by Henri-Paul Rousseau in the province of Quebec, TS continued to spread its roots in Quebec, Canada where the majority of the participating camps still remain. The Power Up program began its outreach in other provinces in Canada, first in Ontario in 2016, and then in New Brunswick and Prince Edward Island in 2021. Power Up is funded by a variety of sources including but not limited to the Public Health

Agency of Canada, The Youth Secretariat of Quebec, and MITACs – a non-profit national research organization (Mitacs, 2023).

The research described in this thesis supports a collaborative study between the University of Waterloo, Laval University, and TS. TS is required to evaluate its program by funders including the Public Health Agency of Canada. The foundation is also interested in improving its effectiveness for greater impact in camp settings. The research included in this study will inform the broader evaluation to better understand the implementation of the program and inform the outcome findings collected. As a student researcher, I collected data during the three summers (2021, 2022 and 2023) to support the evaluation. The broader research project consists of the observational data used for this study as well as the individual findings collected via a Power Up training survey for camp staff and pre- and post- healthy lifestyle questionnaires for both staff and campers, all of which was collected during the summer day camp visits. The Power Up training surveys were completed shortly following completion of the training and asked camp staff about their participation and their satisfaction with the training received. The healthy lifestyle questionnaire was completed at the beginning and end of the summer camp period and asked questions related to determinants of PA (interest, intention, perceived benefits and barriers), attitudes towards fruits and vegetables, levels of PA participation during and outside of the camp setting, sedentary behaviours (i.e. video games, screen time, reading, social media) and eating habits in a normal week. David Larose, a PhD student from Laval University is examining the outcomes using the questionnaires and survey data collected during the summer day camp visits. Whereas this study is helping to inform an understanding of the camp environment and the implementation of the Power Up intervention, David's study will provide an understanding of the outcomes achieved by the Power Up program. This study's emphasis on implementation will inform an understanding of the outcomes achieved due to the implementation of the intervention. The evaluation team works collegially together, and shares data gathered with TS and funders regularly. See Figure 1 below for a visual representation of the summer evaluation timelines.

Figure 1: Timeline of Summer Day Camp Evaluation Visits (2021, 2022 and 2023)



HLQ: Healthy Lifestyle Questionnaires

PUTS: Power Up Training Survey

*Data used for this research study

2. Literature Review

2.1 Health Behaviours and National Guidelines

According to the Sedentary Behaviour Research Network, the consensus definition of sedentary behaviour is that it “refers to any waking behaviour done while lying, reclining, sitting, or standing, with no ambulation, irrespective of energy expenditure” (Tremblay et. al, 2017). In 2022, less than 1 in 5 children and youth in Canada met the national recommended guidelines for sedentary behaviour, which is less than 2 hours of screen time per day for those aged 5-17 (Tremblay et. al, 2020).

Canada’s Guides for PA and HE outline the benefits of being active and eating well, resulting in a lower chronic disease risk and better overall health. It is recommended that children and youth incorporate an active PA and HE lifestyle into their everyday life (Government of Canada, 2021). According to the *Canadian Physical Activity Guidelines* developed by the Canadian Society for Exercise Physiology and ParticipACTION, it is recommended that children and youth, 5-17 years of age accumulate at least 60 minutes of moderate- to vigorous- physical activity (MVPA) daily; with greater activity leading to greater health benefits (CSEP, 2021). The guidelines also state that children and youth should minimize the daily time spent sedentary, which could be achieved by engaging in more active forms of transport (walking, running, biking) and limiting time spent sitting, indoors, and in front of a screen to no more than 2 hours per day (Tremblay & LeBlanc et al., 2011). According to the dietary guidelines of the Canadian Food Guide (Health Canada, 2019), Canadian children and adolescents aged 9-18 have the highest average daily intake of sugary drinks. Water is recommended as the beverage of choice to support health, and prevent dental decay and dehydration, which young children are at most risk for. The Food Guide also emphasizes the importance of HE daily, highlighted by the association between eating patterns characterized by a higher consumption of fruits, vegetables and whole grains and a lower consumption of red and processed meats, refined grains and sugar-sweetened foods and beverages and a decreased risk of cardiovascular disease (Health Canada, 2019). The Canadian Food Guide underlines the importance of creating opportunities to teach and share HE education with children and youth. The transfer of food skills and knowledge to children and adolescents can build self-confidence and self-efficacy that supports the development of behavioural norms around cooking in early life to lay the foundation for life-long HE habits (Health Canada, 2019).

Summer camp programs are an important avenue outside of school time that children and youth can achieve these guidelines. In the absence of school which covers most of the year, summer camps may serve as an important setting for which young people can be presented with a range of opportunities to learn, play and grow that they may not get otherwise.

2.2 Staff Promotion and Habits among Children

Previous research on competency-based professional training and staff PA promotion in summer day camps suggests that there is a disconnect between program administrators and camp staff as they struggle to promote PA at camp. This is evident by observing participating children who are largely inactive when attending these camps (Weaver & Beets et. al, 2014). Camp staff and camp counsellors play a crucial role in serving as leaders and healthy role models. Their training and subsequent implementation of learned skills and tools into activities at the camp is meant to promote healthy behaviours and lifestyles. These behaviours have the potential for lasting impacts on PA, HE and sedentary behaviours in children and youth.

Recent camp studies have placed an emphasis on PA and HE, specifically, whether children in participating camps are being encouraged to be physically active and to follow Canada's Food Guide. One such study examined the differences in the PA levels of children 6-12 years of age in a summer camp based on height, weight, race, gender and socio-economic status as well as various demographic information. Through an ANOVA analysis, the researchers found that attendance at a summer camp provided an opportunity to be physically active. However, there were significant differences in the moderate-to-vigorous physical activity (MVPA) observed based on gender ($t = 3.646$, $p < 0.001$). Girls had a much lower average of MVPA per day compared to boys and normal weight children, with boys engaged in nearly 16 more minutes of MVPA on average per day than girls (Baker et. al, 2017).

2.3 The Importance of Role Models for Youth

In a national study about natural role models and adolescent health (DuBois & Silverthorn, 2005), researchers found that youth who reported a natural mentoring relationship were more likely to exhibit favourable outcomes related to education, reductions in problem behaviours, greater psychological well-being and increased levels of PA.

Most summer camp interventions such as the Power Up program that are targeted at youth and the development of healthy habits are typically implemented through camp staff. The importance of camp leaders and staff serving as role models for children and youth cannot be overlooked. In a study about identifying ingredients in the camp setting that most actively contributed to lasting learning from former campers (Sibthorp et. al, 2020), researchers emphasized the importance of counsellors as an ‘active ingredient’ for learning. Active ingredients are defined as elements of a program that are responsible for the targeted change in behaviour, skill and attitude. It was determined that social-emotional outcomes were primarily achieved in former campers and these outcomes were most useful following their camp experience. Camp staff acting as role models for campers fostered these outcomes, which include providing a safe and supportive opportunity for campers through active camp programming (Sibthorp et. al, 2020).

In another study that explores the perceived characteristics of effective camp counsellors in facilitating positive youth development in residential camps (Halsall et. al, 2016), researchers found that an important leadership characteristic was being a positive role model for campers. Specifically, in supporting youth within leadership programming and setting a positive example. In doing so, it was perceived that campers considered their counsellors as peers and adults they can look up to, which can contribute to generating enthusiasm in participation and more active engagement in activities (Halsall et. al, 2016). Camp staff play a pivotal role in implementing interventions that promote PA and HE as they are the primary link to children at the camp level who they actively interact with throughout their day in summer camps. The literature surrounding the importance of role models aligns with this research study as the Power Up training is centered on training camp staff to utilize the program’s offerings to promote PA and HE for campers. Additionally, their ability to serve as role models is assessed in this study through the SOSPAN observations (PA management, promoting behaviours and nutrition behaviours) that are collected during evaluation visits at summer day camps.

2.4 Capacity Building in Counsellors through Training

A set of articles by a research team from North & South Carolina focused on building capacity in counsellors to create a healthy camp environment that effectively promotes PA and HE for campers. Their intervention involved a competency-based training approach for camp counsellors rooted in a 5M training model referring to- the following: mission, manage, motivate, monitor and maximize (Weaver & Beets et. al, 2012, Weaver & Beets et. al, 2014 Beet & Okely et. al, 2016, Weaver & Brazendale et. al, 2017, Brezendale & Keith, 2017, Brezendale & Beets et. al, 2019). An article of a conceptual model for training after-school program staff to promote PA and Nutrition elaborates on the definitions behind the 5Ms. Mission refers to the process of defining a purpose and creating a framework from which staff performance expectations are drawn. Manage refers to structuring a PA environment to ensure safety and managing activities with even breaks between sessions for recuperation and establishing rules and enforcing them. Motivate refers to reinforcing the autonomy of choice and control in activities and provide positive feedback and encouragement to increase children's perceived competence and enjoyment. Monitor refers to setting PA goals and training staff to proficiently use the techniques employed to report data on PA (i.e. pedometers, accelerometers, observations). Maximize refers to implementing the other *Ms* of the training model in concert with one another to maximize children's PA and HE (Weaver & Beets et. al, 2012).

The 5M training model assisted the competency-based training intervention in guiding development training at a professional level with an emphasis on a core set of skills as well as experiential training in order to develop those skills. Additionally, ingrained in the 5M training model are the "LET US Play" principles, which stand for lines, elimination; team size; uninvolved staff or kids; and space, equipment and rules. This training consisted of video demonstrations and participatory exercises. Video demonstrations helped staff identify games and activities that violated the principles through the addition of lines, elimination of participants and inclusion of large team sizes. Participatory exercises offered possible strategies that would alter and improve games and activities to align with the LET US Play principles. It is possible that the using acronyms such as the 5M model and LET US Play, makes it easier for camp staff to remember what they are taught and apply in during camps without needing to refer back to the training materials. This intervention also included on-site booster training sessions and workshops to boost staff adherence and ensure the retainment of training content in camps. There

were 9 booster training sessions conducted over a two-year period: 5 in the summer of 2012 and 4 in the summer of 2013. Each booster session consisted of a two-hour walkthrough observation of the camp, where on-site staff receive feedback in real-time and a subsequent 45-minute staff meeting following the end of the camp day, where the notes compiled from the observations were presented and suggestions were shared for the purpose of program enhancement. SOSPAN, a *System for Observing Staff Promotion of Activity and Nutrition* as well a SOPLAY, a *System for Observing Play and Leisure Activity in Youth* were instruments that were both used in the study to observe staff promotion behaviours and campers' PA levels. These instruments are commonly utilized in research involving children and youth, as they are standardized tools used to observe and monitor PA intensity and behaviours. The researchers found that the intervention, with support from camp staff, allowed children in attendance to meet their daily recommended PA of 60 mins of moderate-to-vigorous physical activity (MVPA). (Weaver & Beets et. al, 2012, Weaver & Beets et. al, 2014 Beet & Okely et. al, 2016, Weaver & Brazendale et. al, 2017, Brazendale & Keith, 2017, Brazendale & Beets et. al, 2019). The findings of this study show that a developmental, competency- based training approach has the potential to increase staff promotion of PA with resulting short-term positive impacts on the levels of PA observed in children at participating camps.

A recent scoping review that I co-authored examined PA, HE and sedentary behaviour interventions in the summer day camp setting (Larose & Chen et. al, 2023). A total of 1941 articles were identified and filtered via title and abstract and then full text, with a final amount of 28 studies meeting eligibility criteria. The findings of this review outlined that both individual and environmental factors influenced the PA, HE and sedentary behaviours of youth. It was reported that the promotion of PA had positive effects on decreasing sedentary behaviours and the promotion of HE led to reported positive changes (Larose & Chen et. al, 2023). Most PA promoting interventions in this review were based on a theoretical framework, which is often associated with a greater success rate in promoting healthy behaviours. However, the researchers found that goal setting or point system interventions were the most efficient strategies for promoting healthy habits in summer day camps. The use of goal setting was reported to increase the enjoyment of PA and increased the number of steps taken to reach individual and camp-wide goals. Another common strategy for PA interventions was education targeted directly to campers or indirectly through camp counsellors. Both strategies had positive effects on the PA, HE and

sedentary behaviours of campers (Larose & Chen et. al, 2023). Although counsellors are an important resource for the promotion of healthy habits as they are in daily contact with campers, the implementation of interventions that target counsellors in literature are not well described. The interventions vary in the training content, the amount of training and supports that they receive during summer day camps (i.e. booster sessions). However, it was concluded that individualized training for counsellors as well as active support (i.e. booster sessions, weekly feedback and communication) in implementing the interventions during camp have a positive impact on the promotion of healthy habits and behaviours for campers and counsellors (Larose & Chen et. al, 2023).

2.5 The Gaps in Summer Camp Research

Several studies by a research team from Philadelphia explored summer camps as a venue for nutritional education and PA promotion. Researchers examined the extent camp administrators facilitated a healthy environment and argued that more guidance and structure are needed to ensure a healthy environment is created for campers. (Ventura & Anzman et. al, 2014, Ventura & Garst et. al, 2013).

In addressing the gaps in research, there is currently a lack of literature that explores the capacity building of camp staff to promote positive PA and HE behaviours for both immediate and short-term impacts in campers, especially in Canada in day camps. Ways in which proposed interventions could be enhanced to develop counsellors to promote healthy environments and serve as effective role models is an avenue that could be further explored (Haerens et. al, 2006). Summer camps vary to different degrees in how they are operated and are largely dependent on the availability of resources at their disposal. While most camps aim to model and offer safe activities and support healthy behaviours, the way they do so varies across camps.

Power Up is an adaptable and cohesive intervention that provides training, consultation and tools to camp staff to support PA and HE environments. The aim of this research study is to evaluate the implementation of Power Up in summer day camps. Specifically, the proposed thesis questions are related to implementation of the intervention in the camp.

1. How do camp administrators, coordinators and counsellors implement the activities promoted by Power Up in summer day camps?

2. How does the training and supports from La Fondation Tremplin Santé shape the camp environment through the leadership by counsellors and the physical activity of campers?

3. Methodology

Across the three evaluation summers, my role as a student researcher was to visit summer day camps in my surrounding region and collect data for this study as well as for the broader evaluation research. My responsibility was to be a lead researcher in the camps I visited. That means ensuring the data collection protocols were adhered to, printing out and bringing the required observation data sheets and questionnaires, coordinating schedules with the camp administrator for our camp visits and distributing and assisting camp staff and campers with healthy lifestyle questionnaires. Using the validated, time-sampling tools SOPLAY and SOSPLAN allowed us to have a structured and rigorous approach to assessing the camp environment and the behaviours of the participants, which would reduce the likelihood of bias in data collection. The addition of an extra observer, creating a pair of researchers at each camp site added to the rigor of this research study. Additionally, there were also two people present in every interview, which allowed for collaborative discussions after the analysis of the themes.

I was exposed to each camp setting for the duration of each summer evaluation and was able to personally interact with the participants we were observing. I recognize that my direct involvement may influence the findings of the data collection, this research study and the broader evaluation project. The collaborative relationship our research team developed with TS over the multiple years evaluating their program may have influenced the data collection, analysis and the results of this study. Throughout each year, we work very closely with the staff from TS. This includes active communication through emails and online meetings to plan evaluations, present yearly findings, provide recommendations and suggestions and generating reports with them for funders. Our close partnership with TS may contribute to a desirability bias in the data collection and analysis as our relationship with the staff and our positive preconceptions about the program may lead to us rooting for the program and emphasize the positive results and overlook the less than favourable data.

On a personal level, I engaged with and came to know the camp staff and the children at each camp site. This may have created an unconscious desire to report better or more positive results to support the camps that I liked more or had a better experience with. In my experiences at the various summer day camps, there were several counsellors that I believe were doing a great job as leaders and role models. This may have led to a bias in reporting the staff behaviours observed as I assumed the presence of that counsellor led to more positive behaviours and

engagement. This personal influence on the data collection could be guarded against by limiting contact with the individual camps and its participants. It is also important to address how intersectionality may have affected the study, its data collection, and the results. The camps I visited over the three evaluation summers were in relatively small municipalities. In 2021, I visited three camps in Gatineau, Quebec outside of the Ottawa, Ontario city centre and in both 2022 and 2023, I visited a camp in a rural region outside of Waterloo, Ontario. My background is Chinese, and I consider myself to be a minority. This was especially the case during the camp visits as I found myself being one of the few, if not the only minority present in the camp setting. Additionally, due to Covid-19 restrictions in 2021 and issues with recruiting camps in Ontario, I had to visit camps in Gatineau, Quebec as part of the summer evaluation. In addition to being a minority in those camps, I also could not lead as a researcher because I did not speak French which is the primary language in most of Gatineau, Quebec. This may have affected the data collection and results of the study as I perceived myself to be someone belonging outside of the population we were observing and often times felt like I couldn't contribute to the evaluation in equal parts to my French-speaking partner at those camps.

3.1 Study Design

This study is a mixed methods design from multiple sources incorporating quantitative observational data and qualitative interviews. The mixed methods study design will follow a convergent parallel approach, where the quantitative data and the qualitative data were collected and analyzed simultaneously and separately analyzed, with the results being combined and compared to one another (Edmonds & Kennedy, 2017). The interview data explored the implementation of the intervention from the perspectives of camp administrators, coordinators and counsellors. The observational data provides an understanding of camp environments by monitoring the PA of campers as well as the behaviours of counsellors at participating camps using standardized observation tools.

The qualitative, semi-structured, virtual interviews asked administrators, coordinators, and counsellors their perspectives about program implementation and their experiences with the program. These semi-structured interviews provided insight into the implementation of the program from those directly involved with it.

The quantitative data being used for this study included observational data of campers and counsellors gathered during the summer day camps, examining PA and HE behaviours through standardized tools. The observation data collected by the research team provided a comprehensive understanding of the PA and HE environment during camp sessions.

3.2 Qualitative Data Collection

The purpose of the interviews was to answer the following research question: “how do camp administrators, coordinators and counsellors implement the activities promoted by Power Up in summer day camps?” The interviews were conducted with a sample of coordinators and counsellors from participating camps that implemented the Power Up intervention as well as camp administrators that oversaw its implementation at each of their respective camp(s). The goal was to interview five of each coordinator, counsellor and administrator.

The qualitative data were collected using semi-structured interviews via phone calls or virtual video calls that were accessible to the participants (e.g. Zoom, Microsoft Teams, Cisco WebX, etc). An interview guide containing the questions and prompts can be found in Appendix C. The interviews were audio recorded and transcribed for thematic analysis.

Interviews were conducted between April and June 2022 with camp staff from the summer of 2021 and between November 2022 and January 2023, with camp staff from the summer of 2022.

3.3 Quantitative Data Collection

The purpose of the observational data collection was to answer the following research question: “What is the physical activity environment, the physical activity of campers and the modelling behaviours of counsellors at participating camps?” The sample included summer day camps participating in the Power Up program evaluation during three study years. The first year (Summer 2021) included 6 summer day camps in Quebec, Canada that were enrolled: 3 camps from Gatineau and 3 camps from Levis in Quebec. The second year (Summer 2022) included 3 summer day camps in Quebec, Canada and one summer day camp in Ontario, Canada. The third and final year (Summer 2023) included 6 summer day camps in Quebec, Canada and one summer day camp in Ontario, Canada.

Observation Instrumentation

The System for Observation of Physical and Leisure Activity in Youth (SOPLAY) (McKenzie, 2006, Saint-Maurice, Welk, Ihmels & Krapfl, 2011) and System for Observing Staff Promotion of Activity and Nutrition (SOSPAN) (Weaver, Beets, Webster & Huberty, 2014) are the standardized instruments being used to capture observational data. SOPLAY was originally validated and tested using a school-based sample with 160 participants aged 9-12 enrolled in two after-school programs, both of which involved an intervention that was meant to promote PA and prevent obesity (Saint-Maurice, Welk, Ihmels & Krapfl, 2011). Although SOPLAY was initially validated in an after-school setting, it is very similar to a day camp setting as they both incorporate environments that encourage active play and allow youth to engage in physical activities. SOSPAN was originally tested and validated using data collected across four after-school programs and four summer day camps. Both SOPLAY and SOSPAN are validated time-sampling tools that are meant to monitor PA and nutritional promotion and behaviours exhibited in study participants. Since the validation of these tools, there have been many instances of their use in other intervention studies in the summer camp setting. This includes a series of evaluation studies that use SOPLAY and SOSPAN to assess the effects of a competency-based training intervention on the PA promotion of staff and the PA levels of children in a summer day camp setting (Weaver, Beets, Turner-McGrievy, Webster & Moore, 2014, Weaver, Beets, Saunders & Beighle, 2014).

SOPLAY – Systemic Observation of Physical and Leisure Activity in Youth

SOPLAY is a validated, momentary time sampling tool used to measure the PA of campers and observe the movement of youth during times of activity and leisure (McKenzie, 2006). SOPLAY observations are completed in the form of ‘scans’ that are carried out throughout the observation days in predetermined areas in each camp that are mapped prior to conducting observations. Each observation is done in pairs with one person being the main coder and the other being the validation coder to examine the consistency of measurement between coders. The observed activity of youth is coded as sedentary/inactivity which refers to lying, sitting or standing still, walking and very active. The observations are also separated by gender and the areas of observation are checked for 5 environmental criteria: Accessibility, Usability, whether the environment is Supervised, Organized, and if there is a presence of Equipment

provided by the camp staff. Additionally, the observer may also provide some context by reporting on the type of activity taking place during each scan and could include additional notes to explain the activity taking place or report on the behaviours of both staff and campers. Over three study years, SOPLAY and SOSPLAN data were collected between July and mid-August in the Summers of 2021, 2022, and 2023 in participating camps.

The SOPLAY tool captures detailed information about the PA of groups and the environmental context, all in a small interval of time and in different settings (De Saint-Maurice, 2009). Previous studies have estimated PA levels in youth using either objective or self-reported measures. The most common objective measures are heart-rate monitors, accelerometers and pedometers, which are typically attached to participants for documenting physiological changes, energy expenditure and degree of movement. Although they provide consistent readings when applied correctly, the equipment can become costly, and the data collected can often be imprecise for several reasons depending on the measure being used. The readings provided by a heart rate monitor are influenced by factors such as age, mode of exercise, physical fitness capabilities and body size. Heart rate readings have been observed to lag behind when it comes to changes in movement, which has the potential to mask the intermittent activity patterns of the children the instrument is attached to (Trost, 2001). Accelerometers and pedometers are insensitive to a range of activities that occur in a camp setting such as swimming. Accelerometers only provide measures of limb acceleration and can be misleading when reading upper body movements and the sporadic patterns of activity exhibited by children may be difficult to assess with accuracy (De Saint-Maurice, 2009). Additionally, although time-stamped pedometers provide information on frequency, intensity, and duration of PA, the counting of steps may be influenced by body size and the speed of movements. Furthermore, in young children these types of devices can easily fall off and get lost and this instrument cannot be used to track activities like swimming (Trost, 2001). In a study on the validity of the SOPLAY instrument (De Saint-Maurice, 2009), it was found that when comparing the observational data with objectively measured, accelerometer-based PA data, the results indicated a positive and moderate correlation between both measures in terms of observations for very active levels vs objectively measured MVPA ($r=0.562$, significant at $p<0.001$). This was determined by comparing the Pearson's Correlation Coefficients between the accelerometer-based data and the observational data. This result indicates that observations provide valid indicators of MVPA,

which supports the validity of SOPLAY as a tool in evaluating the PA of children. It was also concluded that a higher frequency of scans can improve the validity of estimations of the data collected (De Saint-Maurice, 2009). Scans were completed at various frequencies during 30-minute intervals. The trends demonstrated that error rates increased as the rates of SOPLAY scans being conducted decreased, indicating that more frequent scans have the potential to improve the accuracy of the observational data collected (De Saint-Maurice, 2009).

Self-reported measures for recording PA levels are typically administered in the form of surveys or questionnaires, asking a variety of questions where participants are asked to recall their PA from day(s) prior, levels of engagement and their relative intensities. Some self-reported instruments include the Physical Activity Questionnaire for Children/Adolescents (PAQ-C/PAQ-A), Teen Health Survey and the Previous Day Physical Activity Recall (PDPAR) (Biddle & Gorely et. al, 2011, Weston & Petosa et. al, 1997). Previous studies measuring PA in children and adolescents using self-reported surveys consistently find that there are issues with the validity and reliability of their use in collecting accurate PA level data. This is due to several factors associated with inaccurate assessment, social desirability bias and recall bias (Mindell & Coombs et. al, 2014). In a study that compared direct measures (anthropometry and accelerometry) and self-reported measures (questionnaires) of PA and sedentary behaviours in school-aged Kenyan children, the researchers found a weak-to-moderate correlation between the results of the self-reported and direct measurement data (Muthuri, Wachira, Onywera & Tremblay, 2016). In a different study on the bias and implications of self-reported and direct measures, researchers concluded that significant bias exists across a broad range of health indicators when comparing the two measures and it could lead to over- and underestimation of risk factor and disease prevalence and burden (Gorber & Tremblay, 2016).

In a systematic review that compared direct (e.g. accelerometers and observations) and indirect (e.g. self-report questionnaires) measures in the assessment of PA in a pediatric population (Adamo & Prince et al., 2008), it was found that the two types of measures were low-to moderately- correlated (range -0.56 to 0.89). Many of the studies examined the relationship between direct and indirect measures using a correlation coefficient, while other studies examined the level of agreement through the Bland-Altman method. A majority of the studies included in this review indicated a poor individual agreement between the two measures, with a moderate- to high- level of agreement between the direct measures (observations and

accelerometers) (Adamo & Prince et al., 2008). Absolute and percent mean difference were calculated and presented as forest plots to determine the difference between the two PA measures. They found that 72% of the indirect measures overestimated the vigorous- activity level values obtained from a direct measurement of PA, while light- or moderate- PA levels were underestimated (Adamo & Prince et al., 2008). The lack of a positive correlation could mainly be attributed to the young age of adolescents and youth, which can limit the validity of indirect PA measures, specifically self-reported data. Many previous studies have documented that recall bias is a common issue among studies with a younger population (Adamo & Prince et al., 2008). These indirect instruments or tools are likely to only pick-up longer lasting and whole activities (e.g. a soccer game) and other types of physical activities that can be easily recalled and retrievable from memory. This means that short, and sporadic activities that are more common for adolescents and youth may be missed entirely during recall (Biddle & Gorely et al., 2011), which could explain why there are bouts of underestimated low- to moderate- PA in self-reported data. On the other hand, an overestimation of self-reported vigorous- activity levels could be attributed to an exaggerated perception of time and effort commonly exhibited by children and youth. It is suggested that direct measures such as observations or other objective measures be used with a younger age group (Adamo & Prince et al., 2008). In the case of this study, direct observations are preferable to other objective measures because they can document a wide array of variables from the environmental context to the physical behaviours of the participants and it doesn't rely on the participant's willingness or ability to respond accurately.

A team of researchers examined 60 United States and Canadian studies that employed the SOPLAY instrument to measure PA in leisure-based activity environments for a systematic review (Kinder & Nam et. al, 2023). They found that an advantage of SOPLAY is the adaptability of the tool to be modified for specific activities and contextual characteristics while evaluating group-level PA compared to the use of wearable devices. SOPLAY is a validated, time-sampling, direct measurement tool that can assist in providing valid and reliable data on the PA of children and youth and inform on the specifics of the environmental context in which an observation is made (Kinder & Nam et al., 2023). SOPLAY is utilized in open environments such as leisure and recreational settings, where measuring activity levels is typically complicated as the number of participants and the intensity of their activity changes frequently (McKenzie, 2006). In this research study which takes place in a day camp setting, a direct observational

approach is used to measure children's PA. This is because camper activities and their relative intensity changes frequently, therefore there is less accuracy of self-reported PA under 10 years of age and objective measures are quite challenging to use with young campers.

For the third evaluation year (2023), a modification to the SOPLAY protocol was made, specifically an addition to the SOPLAY criteria. In addition to observing the PA levels of campers (sedentary/inactive, walking and very active), pairs of observers were also required to report on the type of activity being observed. This includes 7 of the following activities; Art Activity (i.e. arts and crafts), Water Activity (i.e. swimming and water-related playgrounds), Physical Activity (i.e. any PA organized by staff), Free Play (i.e. unorganized time where campers can play what they want), Gathering (i.e. assemblies and presentations), Quiet or Calm Activity (i.e. snack time, playing with toys and completing a puzzle) and Gardening Activity (i.e. activities related to an on-site garden). This adjustment of the SOPLAY protocols was created to observe how the levels of PA in children may differ from one activity to another and to understand the types of activities that encourage active engagement and those that do not.

SOSPAN – System for Observing Staff Promotion of Activity and Nutrition

SOSPAN is a standardized tool to monitor camp staff's behaviours and factors related to the promotion of PA and HE by camp staff using observations completed by research staff on site (Weaver, Beets, Webster & Huberty, 2014). The total of 25 behaviours being observed can be separated into 3 categories; behaviours related to the management of physical activities by the staff, staff behaviours towards PA and staff behaviours regarding HE promotion and management during lunch time.

Additionally, another important aspect of the observations is the examination and documentation of the environmental context, collected at the start of each observation period. This includes reporting the type of scheduled activity (before camp, before lunch or after lunch), time of day, number of staff on-site, presence of rain, temperature, and activity location (indoor or outdoor).

The observation tools were adapted for the second evaluation year (2022) to include an additional category with four criteria related to the HE environment at each camp. The additions included reporting on the presence and number of fridges, vending machines, water fountains and HE informational posters within each zone. In addition, the presence and number of

microwave ovens and gardens was also added for the third evaluation year (2023). The SOSPAN tools were adapted to provide further context into the social and physical environments of the camps related to HE.

Research Staff Training for SOPLAY and SOSPAN Observations

To maintain consistency and standardize the approach, prior to the start of each evaluation and data collection phase, all members of the research team involved with the observations completed a mandatory, training session that was approximately 1-hour in length. This included an overview of the steps and procedures necessary to correctly perform an observation or scan in the camp setting. As a group, several videos were reviewed to understand the tools and perform the training through practice within the video. Printed documents with SOPLAY and SOSPAN tools to be used in the camps, were also prepared and used in practice during this training session.

Guiding Protocol and Procedures

Before the first camp visit, coordinators and/or counsellors were notified of the project and reminded of the purpose of the visit to examine the program's implementation of Power Up at camp. Observers collected data in pairs, with one observer being the main coder and the other acting as a second observer to be able to assess the interrater reliability of the observations using standardized tools. Several visits to each camp were planned to observe the camp environments on more than one occasion to increase the understanding of the usual camp environment.

Throughout the summer, each of the respective day camps participating in the evaluation were visited 3 times, this included 2 visits to collect observation data. The first visit was to explore the camp setting and delimit activity zones or areas in which scans would take place. During this visit, the entire camp was mapped, including outdoor and indoor areas/rooms. The different areas conducive to PA were delimited and segmented into zones. These zones were numbered and mapped with defined boundaries that were convenient and clear for observations to take place for the pairs of observers. For example, the walls of a classroom might identify one zone, the painted lines of a soccer field and the surrounding bleachers may be used to identify another or be used to split a larger area into multiple, smaller zones. Each zone also included an observation point, where observers would stand to make an observation every time the zone was

revisited. Once the camp site mapping was complete, the pair of observers spent time practicing the observations in real-time to prepare for the following two observation days. The following two visits were for data collection, to observe the camp environment and the PA behaviours of campers and counsellors using the SOPLAY and SOSPAN tools.

During data collection visits, observations were performed in the form of scans at thirty-minute time intervals. Four observation times took place as follows: 1 scan before the first camp activity (9:30 am – 10:00 am), 3 scans before lunch (10:00 am – 11:30 am), 1 scan during lunch (12:00 pm – 1:00 pm) and 3 scans after lunch (1:30 pm – 2:30 pm). With the exception of lunch, scans were carried out in each of the PA zones, continuously over intervals of thirty minutes, moving from one zone's observation point to the next and repeating the process every thirty minutes. Appendix C includes the data collection forms used for SOPLAY and SOSPAN by pairs of observers to record the observational data collected during each scan.

3.4 Data Analyses

Interview data were analyzed using NVIVO, a qualitative data analysis software that enables the researcher to uncover patterns in the responses across interviews with the participants through transcribed text. NVIVO Pro 12 software was utilized for coding and analyzing data to articulate patterns in the responses (QSR International, 2020). The qualitative data were collected from interviews completed in English or in French with a research assistant conducting the interviews using a translated guide. I was personally present in each interview with my camera off, observing the interview for body language and answering any questions that arose. At the end of each interview, the participants were also provided some time to reflect on their responses and add anything they might not have mentioned in reference to their experiences with implementing the Power Up program. The interviews were transcribed through a program on the virtual platform used to conduct the interviews. The transcripts were reviewed by the research assistant and translated from French to English, where applicable for initial analysis. Following the back-translation of the recorded interviews, the interviews were each given a unique identifying code in preparation for the following analysis (Green & Thorogood, 2018, Bailey, 2008, Kiger & Varpio, 2020). Each transcript was assigned a code based on the order in which they were interviewed, corresponding to that letter of the alphabet (i.e. the third interview would start with a C for the third letter in the alphabet), as well as a randomized three-digit number.

A Thematic Analysis (TA) approach was used to guide the interview analysis process. The TA approach emphasizes the identification and organization of emerging patterns of meaning or themes across a qualitative data set (Braun & Clarke, 2012). In the case of this research study, the TA approach assisted in uncovering patterns which resulted in insights and made sense of the personal accounts and experiences of those who worked directly with TS' program. Developed in 2006 by Braun & Clarke, thematic analysis is a systematic approach that follows a sequence of six unique phases that can effectively analyze transcripts to gain an understanding of the experiences of the participant (Clarke & Braun, 2017). The first outlined phase involves familiarizing yourself with the data. This includes reading and, thorough re-reading of the textual data to absorb as much as possible for each interview. The second step involves generating initial codes, which are labels that act as a summary for a portion of data or content. In the third step, themes and patterns that take shape from the codes within the transcript were located, identified, and highlighted (Braun & Clarke, 2012). After these themes were highlighted, the fourth phase was to review the themes relative to the coded data and the entire data set. This was done to establish potential connections within each interview, whereby themes were observed to emerge throughout. The fifth step was to define and name the themes in which the essence of the theme can be summed up in a sentence or less. The final phase was to gather all of the observed themes in one place, and directly address the research questions (Braun & Clarke, 2012). These steps were then repeated for each interview and their resulting transcripts, and their findings were compared across all participants. The interviews were cross-referenced and converging and diverging patterns of meaning and themes across the cases was identified and reported. (Braun & Clarke, 2012, Clarke & Braun, 2017).

The collected observational data were analyzed using SPSS, the Statistical Package for Social Sciences (IBM, 2020). The SOPLAY camper PA observations were expressed as the percentage of youth observed engaging in each level of PA (sedentary, walking or active) over the total count of children observed in each observation area. The SOSPAN counsellor behavioural observations were expressed as the percentage of observations where the behaviour was observed (answered yes) over the total number of observations in each camp. To assess the consistency between raters, reliability tests were completed comparing data between the two different observers. Reliability for SOPLAY involved use of statistical tests to calculate the interobserver Intraclass Correlation Coefficients (ICC) on the various activity levels – sedentary,

walking and active levels across all matched minutes of observations. This was completed by comparing the observation codes provided from each pair of observers that visited the camp at the same time (Saint-Maurice, Welk, Ihmels & Krapfl, 2011). Reliability for SOSPAN involved calculating the interobserver ICCs as well as the Interrater percent agreement and Kappa agreement of staff behaviours observed between pairs of observers that visited the camps and made observations at the same time (Weaver, Beets, Webster & Huberty, 2014).

4. Results

The next section will cover the results of the interviews conducted with camp staff (administrators, coordinators and counsellors) followed by the observational data collected during summer day camp visits across the three evaluation years.

4.1 Interview Results

Theme #1: Rationale for Participating in Power Up

Throughout the open-ended interview process with staff from camps participating in Power Up, we received varied responses as to why their respective camps decided to be involved in the program in the first place. This includes what they initially hoped to gain from having the intervention implemented in their camps and the anticipated advantages of the program on the camp experience for both counsellors and campers. In analyzing the interviews, we found that there were 3 reasons frequently mentioned as to why camps decided to participate in the Power Up intervention. This includes camp accreditation, funding opportunities and camp alignment with the program's content and values.

Subtheme #1: Camp accreditation

For many camps, receiving official accreditation is an important step of being known as a safe and high-quality summer camp. According to the Canadian Camping Association, camps that want to receive accreditation must comply and adhere to all relevant provincial and federal government legislation pertaining to health & safety standards. This pertains to food service, transportation, health, water quality, building & fire codes, and labour laws and human rights (CCA, 2023). The CCA represents a federation of individual camping associations in each province. It was mentioned in the interviews that being a member camp of Power Up contributes positively to the process of receiving accreditation by the CCA. Participant J292 states:

“I think like Quebec camping association's focus on Power Up and then the inclusion of Power Up in our accreditation standards has made it easy for our board to say, yes, we need to continue to focus on that... This is important, you know, like it's one of the mandatory criteria's you need now to be a certified camp. It's important to us to be a certified camp. This is one of the major ways that we're able to meet that criterion.”

To this participant, Power Up is an essential part of their accreditation standards and to meet the criteria set out by the Quebec Camping Association (QCA). A majority of the participating Power Up camps are based in Quebec and the Quebec Camping Association is currently partnered with Power Up. Thus, the inclusion of the Power Up program appears to be important in receiving accreditation and becoming a ‘certified’ camp. There are many benefits for the camps in obtaining accreditation. They gain access to a database of valuable resources and in terms of outreach, the accredited camps have the right to use the CCA logo as well as one from their provincial camping association (CCA, 2023). Being accredited means parents will have confidence that the camp is qualified to take care of their child and will ultimately bring more participants and funds to the camp itself.

Subtheme #2: Funding opportunities

Another important aspect in running a camp is to have sufficient funding available from year-to-year. Without appropriate funding, summer camps cannot operate as staff cannot be hired and activities that require equipment cannot be carried out with the campers. In the interviews, we found that participating in Power Up allowed for funding opportunities that assisted with their daily operations. The following is an excerpt from the interview with Participant J292:

“When the Quebec Camping Association came to our site, they were like, you gotta reach out, like, there are funding opportunities there for, you know, for your camp. It’s a registered charity, you’re serving an underserved community. So, there are funding opportunities available. And you’re already doing a lot of the work, so it’s a natural partnership. So that was one of the reasons... like I said, the relationship started with the funding opportunities we had already committed to our farm, which is, it’s expensive to run a farm. You know, it was like a significantly large amount of our budget that was now being dedicated to having a farm on site and staff on-site to create the farm.”

Power Up provides ample funding opportunities to help camps operate. In this specific case, there was a farm on-site at the summer camp that needed day-to-day support. TS offers financial assistance for the implementation of original projects that promote the adoption of healthy habits for vulnerable populations (Tremplin Sante, 2022). Through this accessibility program, camps

could receive up to \$2,500 to finance their projects as well as assistance in making connections to local partners. To receive this funding, projects must be developed in disadvantaged communities with a high Social and Material Deprivation Index. As of 2022, approximately 83 healthy habits projects have received this financing since the program's inception in 2015 (Tremplin Sante, 2022). The camp's partnership with Power Up and the subsequent funding they received, in the form of monetary support and equipment helped with farm maintenance. Appropriate funding is important to maintain the camp and thus, for the campers and their experiences at camps. Additionally, during the Covid-19 pandemic, for another participant, having the opportunity to receive funding contributed greatly to the camp experience at a time where there were so many barriers to operating a summer day camp. Participant G864 states:

“In 2020, the pandemic had just started and we are a very small municipality with not a lot of money. Then Power Up offered a \$500 grant for projects that promoted healthy lifestyle habits in COVID mode, so with the camp coordinator that year, we set up a project where we tried to fight against the nasty COVID virus. They accepted our project. We got the \$500 then it allowed us to do great activities with those funds and we took the opportunity to integrate the different challenges that they have during the course of the summer.”

This camp started getting involved with Power Up during the pandemic, and the funding they received by the Foundation at the time allowed them to do more activities with the campers. As they mentioned, they also managed to integrate the challenges put forth by Power Up into their summer programming, which also contributed to the camp environment.

Subtheme #3: Camp alignment with the program's content and values

Another important reason why camps chose to become members of Power Up had to do with the content offered and the values of the organization, which include but are not limited to promoting healthy habits, supporting camp environments to be conducive to the adoption of healthy habits, supporting disadvantaged communities, and emphasizing the pleasure of learning through group interactions and PA and HE (Tremplin Santé, 2023). As previously mentioned, in terms of the content, the Power Up intervention offers many games, activities and tools to

support the development of healthy habits, HE recipes, access to videos to assist with activity planning and personalized support available directly from health experts as part of their program throughout the course of the summer. Additionally, there are also on-site challenges and contests that take place during camp each year (Tremplin Santé, 2023). Participant F082 states:

“I took a look at what they [Power Up] had to offer and thought that it would be a really great fit because in terms of programming, I only have so many ideas for our kiddos to keep them busy and to provide, you know, kind of those backup ideas for our camp coordinator position; who does the majority of the actual activity planning. And so, umm it was an access to another resource for us, for different activities, different styles of activities. Thinking outside the box on things that we maybe haven't offered or traditionally haven't offered, so it just offered a really great opportunity for change. For positive change and we see a lot of returning kiddos from year to year, so making sure that those activities, programs, themes are all updated so it's something new and exciting and they wanna continue to come to camp here year after year.”

This administrator attributed the program content as the driving force for joining Power Up as a member camp. She mentioned that having access to a database of resources and ideas for activities positively contributed to the daily and yearly programming at the camp and possibly bring campers back for more. Also, having many different options for games and activities alleviates stress for the staff, allowing them to spend more time with campers than managing camp programming.

Speaking to the program values more specifically, many of those we interviewed felt that the values presented by the Power Up program aligned with the values of the city or municipality, including values of promoting PA and HE and with values of positive character. Here are examples of each, respectively:

Participant B257: “It's part of the values of the city, everything that is physical activity and healthy living skills, so these values are already discussed in the information that is conveyed through the various activities, whether it's snacks, sports game time, rest time, things like that.”

Participant C272: “I think it's really because promoting good values, healthy eating is really important. Physical activity also has a direct impact on young people who are the most influence-able generation if we can say so.”

Participant H574: “I find that healthy lifestyle habits are something we have a role to play in as camps, it's like an extension of school, it is not It's not just a vacation, we continue to educate children indirectly through the activities we do, the values we convey, etc. That's why I find healthy lifestyle habits important.”

In these examples, we can see that the values of Power Up align with camp and city values and even resonated with the participants themselves. The alignment of values to the program appears to contribute to their reason for joining Power Up.

Theme #2: Supports provided from Power Up

There were many ways in which TS provided support to the summer camps directly. Two types of support included: resources provided by TS and direct assistance provided to the camps themselves.

Subtheme #1: Resources provided by La Fondation Tremplin Santé

For many camps, the TS was able to contribute resources to the camp to help with daily activity programming focused on the vision/mission of supporting the development of environments that are conducive to the adoption of healthy habits among Canadian youth (Tremplin Santé, 2023). One of the ways in which they did so was through the distribution of tools, equipment, and funding to the summer camps. Participant L938 stated:

“I would like to add, other than the scholarships and funding, we received sports equipment such as a slackline, which was used for one of my activities precisely for practicing motor skills.”

In this instance, the participant was able to perform an activity otherwise difficult to complete without the equipment provided by TS. This and other examples expressed in the interviews

suggest that improving accessibility to equipment may broaden the range of activities possible to use at the camps participating in the program.

Another resource that was provided to camps were brochures, pamphlets, and documentation to support the development of healthy habits. These included guide-books for counsellors to help with daily activity programming and also brochures for parents/guardians to support the development of healthy habits. Participant H574 states:

“There are also tools that they give us, that we can share with parents. So, documentation for parents, to raise awareness of healthy lifestyles. The advantage is to share with them knowledge that they do not necessarily have, that we acquire thanks to Power Up. By sharing this, I find that it also encourages them and makes Power Up known to the general public. It gives us tools to work with, we share it with them, and it also helps them to have that visibility.”

TS provides resources to be shared with parents/guardians to encourage the development of healthy habits at home. As mentioned in the quote, there are many possible benefits from providing this form of support to participating camps. It raises awareness in parents about developing healthy lifestyle habits. It also contributes to visibility and potential outreach, not only for the camps but for the Power Up program and TS.

Another important support provided to camps is funding made available through the organization. Appropriate funding assists summer camps with daily programming. To elaborate further on what was previously mentioned in Theme #1, ways in which funding would support camps will vary from one camp to another. In many of the interviews, funding enabled camps to purchase new equipment for use in activities. Participant A977 states:

“It is certain that we have a lot of positive things with Power Up, especially with the budgets that they have given us, we have managed to buy bins for culinary workshops on each of our sites, so that is something which will be able to last over time. So, every year we now have equipment, and we want the counsellors to be able to use it.”

In this case, funding provided to the camps was able to help them directly with obtaining new and lasting equipment for HE related activities and workshops. Additionally, another way that the organization encourages camps to engage in activities is by leading a series of challenges offered to the camps with rewards for participating and completing them. Participant H574 recalls:

“There are things to win for the animation team, the coordination team or the children. In short, there are gift cards that we can pick up, to help carry out activities related to food. It motivates us, it equips us... There was this challenge, ‘Blue, White, and Red’, I believe. We entered the contest, we received a \$75 gift card to go to the grocery store to buy food, to complete this challenge... What improved is the quality of the service we offer, the quality of activities offered to children. It doesn't matter if it's just \$75, this \$75 is the pretext to go and complete a fun, supervised activity, with some material to gain around it.

Power Up seems to offer many challenges and contests for camps to participate in. As mentioned briefly in the quote, there are challenges with rewards catered to both staff and campers. This has the added benefit of increasing motivation and participation for all involved. It creates goals for campers and staff to achieve and an opportunity for more activities through the challenge itself or through the use of the funding in the rewards that they receive. This form of funding has the potential to improve the quality of the overall camp experience.

Subtheme #2: Direct assistance the organization provides to the camps

Based on the interviews, Power Up also offers support directly to the camps via assistance from the Power Up organization team, and through the relationships they form with participating camps. Here are a few accounts of participants’ experiences with this form of support:

Participant A977: “I had included gardening there precisely in my action plan, [Power Up organization staff member] helped me a lot. She made connections with the regional table of agriculture, which gave training on gardening that I followed,

the partnership opened doors where you have other tools, and you have contacts... We were always well-supported when I needed to talk to Power Up. They always had time, they were always available.”

Participant F082: “They were always readily available to answer my questions and help me in any way that they could, which was very, very nice to see. So, I have the utmost confidence that in the future, if you wanted to know something in a timely manner and I had to have a coordinator or leader reach out, I know that they would treat them with the same respect and integrity that they gave to me... I never once felt like I was being a pain to them... It was very clear that we were a priority for them. So, I appreciated that.”

Participant J292: “But it's been positive. Anyone who's worked with them or had to reach out to them as we were developing. I always felt like there was good support in place to be able to do what you wanted to do... What I like is that they don't just give you the money. There's been an ongoing conversation about different projects that we have... They've been partners in that they came to our site. They saw the projects in action. So, for me, it's been a positive experience.”

From these first-hand experiences, there was much reported about a positive partnership and relationship with the Power Up organization. Having experts to consult and open communication readily available to answer any questions or concerns that may arise, benefits the camp staff in planning activities and may increase use of the program. In the first quote, receiving direct support from the organization allowed the participant to be introduced to individuals/organizations to assist with HE initiatives. In the third quote it is clear that TS does not wait for camps to reach out, but they are proactive with ongoing conversations about projects and check-ins with the camps regarding their goals and activities.

Another way in which the organization supported camps was through the dynamic training that was offered to staff and the accessibility of those resources throughout the summer. These resources would assist counsellors in daily activity programming and give them ideas on ways to improve activities to promote healthy habits.

Participant I815: “The training was very practical because it allowed us to develop new work habits with them, and new activities... Doing the trainings, it allowed us to do activities that were a little more developed.”

Participant G864: “Well, I think that the training is very dynamic, and just the fact of having lots of little webinars that were available. The counsellors could go and find the webinar that interested them, and the documentation that is on the website.”

Many of the participants reported that the training was mostly a positive experience. In the first quote, the participant mentioned that the training was practical and helped staff lead activities for campers that was engaging, fun and encouraged development of healthy habits considering different sized groups and other factors. For example, there were suggestions for how to ensure campers in large group settings are not waiting in line for their turn or eliminated from play without participating in something different. The second quote emphasized how dynamic the training was, encouraging the use of follow-up resources and webinars available online anytime for interested staff. Being able to provide direct assistance to the camps via dynamic and accessible training appears to encourage program use and enhance the activity planning and programming of the camp.

Lastly, TS directly assisted several camps through a new pilot initiative called S-Squad, which started its testing phase in the summer of 2022. It was only offered in certain regions of Quebec and benefitted select camps that were recruited specifically for this project. The eligible camps were camps newly signed on to participate in the Power Up program or those that did not have very much experience with the Power Up intervention. The S-Squad consists of a handful of counsellors/ambassadors representing TS and the Power Up program who work closely with the camps on a frequent basis to provide support via booster sessions (e.g., additional training, visits to camp and discussions with camp staff about the Power Up program to ensure proper implementation) for the promotion of healthy habits for campers. This is discussed in further detail in the following theme.

Theme #3: The Benefits of Power Up Implementation at the Camp Level

Participation in the Power Up program created positive changes to the daily programming at camps and had an influence on the behaviours of the camp staff. There were 3 main benefits or changes that occurred at the camp level as a result of Power Up program implementation at participating camps as reported by interviewees. This includes the effects of the program on the decision-making process, program resources used in the camp setting, and HE activities.

Subtheme #1: Effects on decision-making for staff

For many camps, the program's training and content influenced the decision-making process for camp staff. Specifically, the program was able to provide staff with insight and perspective on creating inclusive groups and camp activities to better support healthy habits. Participant J292 stated:

“I think in reading through the standards Power Up had, it allowed us to start thinking about how we were promoting healthy habits with our kids... Realizing some of the things we were doing could be potentially harmful, I use loosely, but you know are not supporting healthy habits. We use a lot of treats as rewards at the time, so there were definitely things that we needed to start shifting... We started to frame the discussion differently too... I mean a part of a lot of organization's culture, we tend to do things because that's the way we've always done them. And I think just looking at that [Power Up] evaluation tool, it made us question or at least talk about the things that we were doing. It didn't mean we changed everything. But I think it opened the dialogue a lot more, which I think was helpful.”

The program standards and its tools allowed staff to gain new perspectives and re-evaluate the key messages being taught to campers. In doing so, it created room for changes to occur to move past the traditional ways of doing things just because they have always been done that way.

Other ways in which the Power Up program has influenced the decision-making process of camp staff is through the physical activities performed at camp. TS' focus on inclusivity and addressing delicate topics resonated with interview participants. This is an example from the interview with Participant D992:

Interviewer: *“While Power Up was implemented, did you see any benefits to your camp from participating?”*

Participant D992: “Body image and everything. It really applied to me, being a person who had problems with that before. I think it was really valued as it has really changed since the implementation, as before when we choose teams for a game, there were a lot of injustices, like little remarks and the guys would be on one side the girls on the other, lots of stuff like that. I think it has really changed those habits. I think it's very good, I think it also enhances the child's own self-esteem... From the training we also learned to diversify the games so that the children move all the time when we find different consequences than being eliminated. That's something I didn't do before Power Up.”

From this excerpt, we can see that the Power Up program had an influence on this coordinator's activity programming. They were able to apply what they learned through participation in the program to improve the activities by including all campers, regardless of age, sex or size. In doing so, it addresses the issue of body image and also takes into consideration the child's well-being and self-esteem. Additionally, the Power Up training also taught staff to modify and diversify activities, with an emphasis on continuous movement and participation through the removal of elimination games. For example, in an activity like Doctor Dodgeball, campers do not simply get eliminated when they are hit with the ball from below the waist. Instead, they can continue to participate in a new way staying still and jumping to catch incoming balls thrown to their side. This allows them to opt back into the game if a ball is caught. Additionally, they have the added task of protecting the person they designate as the doctor who can run around and 'revive' those that have been hit before. This serves to promote PA while improving the camp experience for all involved.

Subtheme #2: Program resources or materials used in the camp setting

Based on the interviews, TS also provided access to many resources for daily use in the camp setting as was noted in the previous theme. Here are some examples of resources or materials used in the camps by two interview participants:

Participant C272: “What was really useful I think is related to resources. I know that several counsellors used the Power Up website because it offers several ideas, they went to see it there, they did great activities with it, and they were inspired by it... They give a lot of activities and materials that the counsellors can use during the day and all summer long in fact.”

Participant F082: “We used a lot of the games in some of those resources that were provided from Power Up... It was an access to another resource for us, for different activities, different styles of activities... We were mailed a package of several different trivia games and mythbuster stuff, information and cards, like little handheld flip booklets for our back pocket to use during unstructured times... These resources were exactly what I was looking for and what I was promised I would get out of the program.”

The response to the resources or materials made available by TS for direct use in the camps was viewed positively by interviewees. Having access to information and materials was very useful and worked well as inspiration for activity planning. Additionally, providing a mixture of online resources and in-person materials will ensure that it appeals to the needs of any staff member for use in the camp setting.

Furthermore, there was also an emphasis in the interviews on the importance of having an easily accessible database of various activities and ideas for counsellors to save time and energy. Below are two quotes exemplifying this.

Participant G864: “Personally, I loved their Activity Bank, which you can look up on their website... I think it's a lot easier because they have the ideas that are already developed on their site. But you know we can adapt them for us very easily. We don't reinvent the wheel; we go with the ideas that they bring us... I see it as a big bag of tools, and we pick and take what we need there... I really used their tools whether it's on paper or the material on their website.”

Participant K549: “Sometimes, as coordinators, we don't have much time, so having databases or information or parts of training that we can give and train counsellors is really relevant... Often we don't have the time to add as many things as we would like, so sometimes having resources from Power Up, it's really relevant to add little things that we wouldn't have thought of.”

From these quotes, we can see that having access to an activity bank is beneficial to camp programming. Being able to refer to these pre-developed resources at any time and having the tools and activities be easily adaptable to suit the individual needs of each camp using them. As mentioned in the first quote, having resources readily available to pick and choose saves the staff time and energy planning their daily activities, which will in turn allow them to spend more time on other camp-related tasks to further improve the camp experience. Furthermore, using activities that have been successful in other settings builds evidence informed practice in the camp setting.

Subtheme #3: Application of healthy eating content in the camp setting

Apart from physical activities, camps have much to gain from TS in terms of the HE activities that are recommended in program participation and training. Below are two examples of this:

Participant C272: “I think for the food part of training, it was just to check the lunch boxes, there was also a little activity, we explained to the counsellors that there were little cards with which they can make meals, let's say for example ‘what does it take in your day to have all the food groups?’... I have a counsellor who did an active game with the little food cards. Each kid had to make a balanced meal with the cards in an obstacle course. They would do the obstacle course, take a box, come back, then together afterwards with their team, they made a meal that followed all the food standards of Healthy Eating Canada.”

Participant D992: “I look at children lunches more now. It seems I look more at what children eat, I value good things in their lunch. I also bring more good things to camp... The little food cards were very useful. It was integrated in games a lot I believe.”

Staff received training related to promoting HE habits and these examples show that the way that counsellors engaged with campers related to HE changed because of their exposure to the training. Power Up provided food cards that are commonly used in the camps to incorporate HE into their daily activities. The cards are used to teach campers about ingredients and food groups and are also integrated into games to challenge the knowledge of campers on HE topics. As mentioned in the second quote, the Power Up training brought new perspectives to the way counsellors think of foods and different ingredients, teaching staff to be more aware of HE topics with campers. The training encouraged further promotion of HE behaviours through open dialogue with campers.

Subtheme #4: Assistance of S-Squad in the camp setting.

As it was briefly mentioned in the previous theme. The Power Up program ambassadors from the pilot project S-Squad visits summer day camps to assist with the implementation of the intervention. At the camps, they would encourage camp staff to use the Power Up tools and assist others to do the same, emphasizing healthy behaviours. I interviewed one administrator who was part of this pilot project. Participant G864 stated:

Participant G864: “We were also lucky to have this year, the Power Up S-Squad. Counsellors came from TS [La Fondation Tremplin Santé], who spent a day with my counsellors, so that they could see how our camp worked, and to lead activities. That was much appreciated.”

Interviewer: “*Did you have any expectations for this S-Squad before volunteering?*”

Participant G864: “It was beyond my expectations. I was expecting them to come and spend a day at the camps and get the young people moving, but it wasn't just that, they arrived with a lot of things. We received a week or two before, a box with lots of material for the day that they were coming to spend with us, then we were able to reuse the material. When you don't have a lot of money, these little gifts are always very appreciated.”

Interviewer: “*And I imagine that has improved the camp experience for the counsellor and the children?*”

Participant G864: “Yeah, the children liked it and the counsellors too. As I told you earlier, it allowed us to see how it works in a different way. The evening that the S-Squad came, I took advantage of it. It was mid-season for my camp, that day we had a little happy hour around the pool, we spoiled ourselves, we ate some pizza, we talked about how the camp was going, and then the S-Squad came to join us, so they were able to chat with us outside the camp. It was very interesting.”

The administrator we interviewed who was exposed to this pilot project seemed to view the opportunity very positively. They enjoyed the engagement, ideas, and the materials provided by the S-Squad and it was helpful to their camp. This initiative has the potential to benefit participating camps as having experts in the Power Up intervention visit and guide the staff would likely lead to greater uptake and usage of the program and its tools.

Theme #4: Challenges with Power Up Implementation

Barriers and challenges in implementing Power Up in the camp settings were discussed in each interview. Four main challenges that camp staff faced in implementing the program in their summer camps were identified during interviews. The challenges that emerged as themes included an absence of communication and supports available, aspects of training that weren't well received, inadequate use of the provided program materials and language barriers.

Subtheme #1: The absence of communication and direct support available during camp

From the interviews, there appears to be a varying degree of direct support provided by TS to individual camps during the summer. In contrast to the evidence presented in Theme #2, where camp staff recalled receiving consistent communication or contact with TS staff, there are other interview participants that felt the opposite occurred. Below is an excerpt from the interview with Participant C272:

Interviewer: "If you had any questions who do you refer to? Do you have direct contact with La Fondation Tremplin Sante or do you go to the website, for example?"

Participant C272: "Uh, so far it never happened that we had questions. If it happens, it would really be on the website because there is no number. If we call our supervisors about it, I don't think anything will come from it because it would not be classified as 'urgent'"

Interviewer: "Okay and for the counsellors for example, they could refer to you?"

Participant C272: "Exactly. They can refer to us; we give them an answer. Usually if we are not able to, we would rarely go to the website, and then it sort of stops there... We definitely see them less and less now. I remember my first year in the camps, we used to talk about it [the Power Up program] a lot, but as it progressed, it seems that it lost a little importance."

In this case, the coordinator described not having direct lines of communication to TS staff readily available when it came to Power Up content. The Power Up website would be their primary source of information and there was no other place that they knew to get information if the questions or concerns were still left unanswered. For both their supervisors/administrators and TS staff, there was no open line of communication for dialogue to occur related to program content. A lack of this communication and check-in with the camp could have contributed to the program's decreased presence and importance in the camp setting. In another interview with

Participant H574, it was outlined that they were missing direct support from TS at their respective camp:

“They at TS [La Fondation Tremplin Santé] are too popular. Sometimes, things go very quickly in the camps and the coordinators or the management team, we don’t have time. We deal with emergencies as quickly as possible. And sometimes, when we manage the emergency, the aspects of healthy lifestyles take second or third priority... Sometimes it would just take a little more of their presence in the field, if they were able to do it.”

This quote from an administrator outlines how more direct support and a greater presence in the summer camp setting from TS could help the camps maintain the healthy lifestyle aspects in their programming, which does not typically take precedence during emergencies or busy situations in the camp. However, the Foundation’s lack of presence may be attributed to the number of participating camps, as it would not be possible to always offer the same level of direct support to every camp. Currently, there are hundreds of camps participating in the Power Up intervention, with that number increasing every year. It would be difficult to distribute their efforts equally in assisting the individual camps. It is possible that their focus may shift towards new camps that may need more assistance with integrating the program, rather than be present for camps that have already committed to participating in Power Up for multiple years.

Subtheme #2: Aspects of training that weren’t well received

An important factor in a camp’s likelihood of using the program’s resources and materials is based on their perception of the training received. If the training content does not appeal to camp staff and if it is not believed to be useful, it is not likely to influence the activity planning in the camp setting. Below are some quotes that represent this subtheme:

Participant D992: “The online training is really good. But I find it a bit childish. As if they were training children.”

Participant I815: “We tried to make our training really lively, so it was face-to-face. Because you know, to do a training online on the computer, and to tell them to read something, it does not work very well.”

Participant C272: “For body image, it’s really more difficult to integrate. I just think it’s just poorly taught, I could say. This is a subject that is more delicate with young children, there are also counsellors who are not comfortable talking about it. They need to integrate it more and train counsellors on how to do body image activities.”

Participant F082: “I think honestly, having only done the like, escape room version of training, I think for the age group of youth, in terms of volunteers and staff that we had, I mean I think it went over well. But I would like to see maybe a different one if we have the same staff or whatnot that we kind of have different ones we can rotate through year to year.”

These quotes highlight some of the perspectives of those interviewed regarding the training. Many camps participated in online training since the start of the COVID-19 pandemic; there have been some that feel that the content is too childish or does not work very well online. While specific training content such as the Escape Room focuses on the interactive and fun elements for counsellors, it does little to convey important concepts about implementing healthy habits and activities in the camp setting. Additionally, many interviewees found it difficult to put the training into practice, to enhance team-building and have fun, when it was done remotely and online. The last of the above quotes mentions the problems with integrating body image into camp programming. They discussed that it was great to have the content included in the training, however they felt it was a delicate topic for counsellors to integrate into camp programming because they may be uncomfortable introducing it and integrating the topic into the daily activities.

Many camps train their counsellors indirectly after administrators and coordinators attend the training sessions and the yearly summit with TS. Administrators and coordinators then bring this information to their camps to train their respective counsellors and staff. Direct training by

TS is less applicable to administrators and coordinators because they are not the primary leaders for the campers. This is evident in a quote by Participant C272:

“As a coordinator you can do a few activities, but apart from that, it was really difficult to apply [the Power Up training] in the camp life, especially when you're not a counsellor. My contact was really limited with young people... I really liked doing the training, for me personally as a coordinator, it really helped me and I found it interesting, but it wasn't so applicable for me. I would have preferred it to be my counsellors who followed it. In the situation where it would have been my counsellors who had taken the Power Up online training, that would have been the main resource that could help them with everything, but it didn't happen.”

In most cases, the counsellors themselves did not attend TS' training but received information about the Power Up program resources and content second- or third- hand from coordinators or administrators. This is further solidified in this quote from Participant H574:

“I've already told them at TS [La Fondation Tremplin Santé], if their job is to try and convince us managers to embark on the process, if we're convinced, we'll be able to pass that on to the counsellors who themselves will pass on to the children. But you have seen that there are a lot of links between the Power Up initiative, and the child who is the end customer. There are like 2 links and these are 2 links that could be fragile. The coordinator, they may not have the time, and even the director of the camp may not have the time or may not be so involved in the camp programming. And then, I have the counsellors, most of them are young. If we can't convince them that Power Up and promoting healthy lifestyles is cool, they will have a hard time using those resources.”

The counsellors may benefit more and feel more encouraged to access the program's tools and resources if they were to attend the training directly from TS. As the administrator stated above, these links are fragile and adding more would not help with program uptake and usage.

Subtheme #3: Inadequate use of program materials and resources in activity planning

As previously mentioned, TS provides a plethora of tools and resources, available on-site at the camps and easily accessible on their website. However, usage of these materials are dependent on the camps and their staff's desire to use them. A barrier to program usage is a lack of interest and lack of time spent encouraging counsellors to use the tools. Below are two quotes that personify this:

Participant D992: "I find it difficult to encourage the counsellors because I'm not with them all the time, so I can't check. I can't be sure, even though they tell me they're going to use them, I can't guarantee that will happen. For me, it is difficult to make sure that there is really Power Up in the camp."

Participant E354: "I have the impression that those who were coordinators last year and the other years did not go forward with Power Up. They kept like the tools we had from the beginning, but they didn't add any more. They didn't talk about it. I think those who were coordinators last year were less interested in the program."

From these comments from two coordinators at Power Up implemented camps, they convey how difficult it is for them to encourage and ensure the program materials are being used since they are not often with the counsellors and campers. Additionally, it is also hard for coordinators to encourage use of the program if they lack an interest in the program and its content.

Time is another important factor that affects a camp's ability to use the program tools and resources. Below is an excerpt from the interview with Participant K549:

Participant K549: "When the camps started, it was often too fast for us to continue trying to do Power Up activities... There were guides, and documents that they could access. We only had one or two copies in the counsellors' room that was made available to them. But they often, the majority of the time, did not go to consult them because they did not have much time."

Interviewer: “I know it’s going fast in the camps, but were there ways to encourage counsellors to go and look at the tools?”

Participant K549: “Once the camps started, not really. It often went too fast. At the beginning of camp, we mentioned it once or twice, but after that we didn’t really have time to talk about it again.”

Based on this comment, it can be understood that when camp starts, there is a lot happening at once, and a perceived lack of time. If counsellors are not readily using the materials already, time may not be spent reminding them about the resources. Camp staff need an ample amount of time to become familiar with the provided tools to continuously consult them and incorporate them into activity planning. This is difficult to do with a lack of free time during camp, especially considering most camps complete their training only a week or two before the start of camp or in some cases, during the first week.

Subtheme #4: Language barriers hinder program uptake in English-speaking camps

TS is based in Quebec, Canada. Although they have recently begun outreach of their Power Up program to other provinces, a vast majority of their participating camps are francophone. The Power Up program including all its resources and materials were initially created in French. There exists a language barrier when it comes to the transition of these tools to English. Below are quotes from the only two interviews conducted in English:

Participant F082: “In terms of the training, I had to sit down with a TS [La Fondation Tremplin Santé] staff member to understand which ones we were supposed to be looking at. Part of that issue is the traditional training they offer is only in French. And so as an English-speaking site, I unfortunately do not speak French... There were a few resources that they told us for sure were in English, and they weren’t at the time.”

Participant J292: “Sometimes it’s been a challenge around language. Our camp is predominantly anglophone in Quebec. So that’s been a bit of a challenge... At times, I’m the most like, bilingual as it gets, and I’m not that strong in French. So that definitely has been a barrier at times.”

The two administrators that were interviewed in English mentioned their struggles with accessing resources in English for the Power Up program. It appears they do not have the same access to resources and materials in English as they would in French. Additionally, some TS staff promised that some resources would be in English, but were not available which hindered the uptake of the program at these sites. As well, this reduced the likelihood that administrators, coordinators and counsellors from these sites would try to access the materials again if the resources cannot be found in English on the first attempt. This language barrier will continue to be a problem to TS and affect their outreach goals to predominantly anglophone provinces unless otherwise fixed.

Theme #5: Suggestions and Recommendations for the Power Up program

Towards the end of the interview, participants were asked about changes they would like to see from the Power Up program and implemented in their respective camp settings. The suggestions and recommendations from camp staff who experience the program first-hand are crucial in understanding the shortcomings of the program and for improving it for future implementation. In this final theme, I will highlight the key recommendations that were shared by interviewees. There were 2 main categories of recommendations that were proposed by the interview participants. This includes recommendations for Power Up resources that are currently present but are inadequate or need improvement as well as recommendations for TS for components that are missing.

Subtheme #1: Areas of the Power Up program in need of improvement

During the interviews, it was mentioned that there was a need for extra materials at camps and a revision of currently provided materials that need to be improved upon to enhance the program’s uptake and to convey important health information. Participant B257 states:

“We have small pamphlets, which was a kind of catalog if you will, with health information on moving well, and eating well, but it wasn't things that were necessarily catchy for the child, so it could have been used in the planning for counsellors, but as a manager, it was not our number one objective last year... You know, the material, I don't know if Power Up was all the same for everyone, but at the material level, apart from a few pamphlets, and stickers, there was no other material provided.”

Based on this recommendation, we can understand that these pamphlets that could serve as take-home resources did not appeal to the target demographic of campers who are a younger age group. This coordinator stated that the provided pamphlets were not prioritized as they were not useful for both counsellors and campers. If these materials could be improved to cater to the target audience of young campers, they could potentially convey the health information more effectively. Although it may be attributed to that specific camp and what they were receiving from TS, extra materials provided for the camps would also be beneficial. Additionally, it might be important to emphasize that the target audience and the goals or key messages of these take-home resources need to be clear to the camps in order for them to be used effectively.

The Power Up program offers many ideas and suggestions for the planning of HE related activities. However, camps with a limited budget may face certain barriers in implementing these ideas into their daily camp programming. Participant C272 states:

“When TS [La Fondation Tremplin Santé] offer ideas, they will offer to taste, to try fruit, stuff like that, but in the city, our budget is really very limited. Sometimes we can't really do that... It would be a really good idea to include recipes with a ‘low-cost’ budget. No need to spend so much money, and things that can be kept for long, because we do the purchases at the beginning of the summer, and by the middle of summer, it has to last. If you buy vegetables, they won't survive that long.”

From this quote, we can understand that a lack of a spending budget impedes a camp's ability to implement HE related Power Up ideas into the camp programming. Providing ‘low-cost’ alternatives for activities involving food will support and account for camps that may have a limited budget for HE activities.

Another recommendation for an aspect that needs improvement is related to the online training provided by TS. Participant B257 states:

“Last year there was a small training, a matter of 45 minutes to 1 hour, something like that, that was online. If I had a recommendation, it might be to do these trainings face-to-face, to make the counsellors proactive in it. They already have a lot of tasks. The camp is very short and when you add something else and it's badly introduced, it will just pass and will not be taken into consideration. I have the impression that if it's maybe face-to-face, that it's interactive, which has a little activity related to that, you know, people could benefit from it.”

This coordinator emphasizes the importance of engagement and being physically present to participate in Power Up training as opposed to completing it online. Online training may be more accessible but according to this participant, it may not prove useful for camp staff. TS does have in-person training sessions, namely the yearly Summit. However, these are exclusive to those in Quebec City where the organization is based. Considering their goal is to further extend the program's reach to other provinces such as Ontario and New Brunswick, it would be beneficial to have more in-person training options available away from where the organization is based.

TS does have translated English resources and materials, but the amount of content readily available is not nearly enough. Below are excerpts from interviews with Participant F082 and Participant J292, respectively:

Interviewer: “What would you recommend being improved to support camps and in implementing Power Up?”

Participant F082: “English versions of everything! That is my one thing.”

Interviewer: “What would you recommend being improved to support camps in implementing programs such as power up?”

Participant J292: “Well for us, certainly more English resources would be helpful... Language has been like the number one barrier, for sure.”

As mentioned in the previous theme, the gap between what is available to French-speaking camps compared to primarily English-speaking camps is significant. In order to make progress towards outreach to other parts of Canada, it would be recommended that The Foundation adapt their tools and training to overcome the language barrier.

Subtheme #2: New possibilities for the Power Up program

During the interviews when participants were asked about their recommendations for improving the program, many of them mentioned new aspects and additions for the Power Up program, that so far have not been implemented before. One such recommendation comes in the form of an active social media account. Participant E354 states:

“It could be an option to have a Youtube channel that presents the tools or the news of the week. Then I can just send the link... I know we have training videos on Youtube, but you know for example, the 5 games of the week sounds like that could be cool... The coordinators can also present the short video at their morning meeting. It can be done quickly.”

Although TS does have a Youtube channel, it only currently has 49 subscribers and 50 short videos spanning the past 4 years, with only 5,500 total views across the entire channel. It is primarily dedicated to uploading short key messages for training purposes. The above quote from a coordinator mentions how an active Youtube channel could be used as a new avenue to share updated information to all Power Up participating camps. They could introduce new challenges, activities, tools or inform on news related to the program on a regular basis. These videos could be catered to help the counsellors or convey key messages to campers. The coordinator also mentions how these could be shown and shared during meetings with camp staff and it would not take long to do so as Youtube is available virtually everywhere.

The last recommendation deals with the lack of program content about stress management and well-being. Participant I815 states:

“We touched on the camp aspect. You know, in terms of healthy lifestyle habits, I think. It's still good and broad - The program, and the material that is developed... I feel that there is a lot of content, especially in relation to physical activity, and a little more nutrition, and that's normal because kinesiologists and nutritionists are there at TS [La Fondation Tremplin Santé]. But I think that the health and well-being side, stress management, could be something that could be developed... I think there could be a little bit more material on that side.”

This administrator mentions that there needs to be a greater emphasis on the mental health (stress management) and well-being content for campers. The primary focus of the Power Up program has always been centered around the PA and HE of campers. However, it was only recently that they started expanding their focus to include aspects of mental health. Discussions about body image are an example of something they recently started introducing to the training. Materials added to address stress management and improve well-being would be beneficial for the mental health of campers.

4.2 Observational Results

Over the course of the 3-year evaluation data collection periods, a total of 632 SOPLAY and SOSPAN scans were completed over 35 observation days, at 17 respective camps in different geographical areas and cities within Ontario and Quebec (Table 1). The majority of camps were French-speaking (n=14) and minority English-speaking (n=3). There were two data collection days conducted by each pair of observers at each participating camp, totaling 259 scans in six camps in 2021, 117 scans in four camps in 2022 and 256 scans in seven camps in 2023 (Table 2). Thirty-five SOSPAN lunchtime, HE and nutrition related scans were also completed during this measurement period. Tables 1 & 2 show the number of participating camps and the number of completed observations during data collection visits, separated by province and geographical location. 4,910 boys and 4,756 girls are represented in these scans, with many children being observed on multiple occasions and over multiple activity days.

Table 1. Location & Number of Participating Camps

Evaluation Year	# of Quebec Camps (n=15)			# of Ontario Camps (n=2)	Total # of Camps (n=17)
	Quebec City/Levis	Montreal	Gatineau	Wilmot	
2021	3	X	3	X	6
2022	3	X	X	1*	4
2023	3	3**	X	1*	7

*The participating camps in Ontario were English-speaking.

**Only 1 of the 3 participating camps in Montreal were Anglophone.

***Due to Covid-19 restrictions, only camps in Quebec were recruited in 2021

Table 2. Number of SOPLAY and SOSPAN Activity Observations

Evaluation Year	# of Quebec Camps (n=592)			# of Ontario Camps (n=40)	Total # of Camps (n=632)
	Quebec City/Levis	Montreal	Gatineau	Wilmot	
2021	72	X	187	X	259
2022	97	X	X	20	117
2023	107	129	X	20	256

4.2.1 SOPLAY Results

Camp Environment

The observations were conducted in areas where camp activities and programming take place and are checked for 5 criteria related to its environment, speaking to its capacity to be used as an area for PA. The mean percentages of these area observations are shown in Table 3. The observation results across the three evaluation years indicated that the camp areas were always

accessible (100%) and usable (100%). Results were greater in 2021 than both 2022 and 2023 regarding areas being mostly supervised by camp staff (100% in 2021 and 85% in 2022 and 2023) and having organized activities (88% in 2021, 67% in 2022 and 60% in 2023). A lower percentage of organized activities observed in 2023 could be attributed to the greater number of observed ‘free play’ activities observed. Having equipment present that is provided by the camp was higher in 2023 compared to previous years (61%, 34% and 77% in 2021, 2022 and 2023, respectively). It is important to note that it is possible for many activities that take place during camp to not require the use of equipment. Additionally, observations exclude equipment that are already present in the camp environment (i.e. basketball nets, soccer posts and hopscotch squares).

Table 3: SOPLAY Physical Activity Camp Environment Area Observations

Variable	Definition	Evaluation Year		
		2021 % (95% CI)	2022 % (95% CI)	2023 % (95% CI)
A – Accessible	Area is accessible (e.g. not locked or sectioned off)	100	100	100
U – Usable	Area usable for PA (e.g. is not excessively wet or windy)	100	100	100
S – Supervised	Area is supervised by camp staff	100	84.6 (78.1, 91.2)	84.9 (80.6, 89.3)
O – Organized	Organized PA (i.e. lead by a counsellor or camp leader)	92.6 (89.4, 95.8)	66.7 (58.1, 75.2)	60.6 (54.7, 66.6)
E – Equipment Presence	Equipment is provided by the camp and present in the area for use in activities	66.5 (60.8, 72.3)	34.2 (25.6, 42.8)	77.2 (72.1, 82.3)

For the 2022 summer evaluation, there was a modification to the research protocol that included additional measures to the observations where the physical environment related to HE was assessed for the presence and number of vending machines, refrigerators to store lunch and snacks, water fountains and educational Power Up posters on-site. For the 2023 evaluation, a further two criteria were added as well to include microwaves and gardens into the observation

protocol. The total number of each variable present at the camp sites by year are presented in Table 4. There was a high number of microwaves present at the camps but also a low number of refrigerators observed to be available on-site and very few educational posters related to the Power Up program and/or its resources observed on-site as well.

Table 4: Camp Food Environment Observations

Variables	Evaluation Year		
	2021 #	2022 #	2023 #
Water Fountains	X*	33	58
Refrigerators	X*	19	5
Vending Machines	X*	0	10
Power Up Information Posters	X*	11	20
Microwaves	X*	X**	25
Gardens	X*	X**	2

*This was an addition made starting the Summer 2022 program evaluation

**In 2023, additional criteria (microwaves and gardens) were added

Camper Physical Activity Engagement Across Three Evaluation Years

The percentage of observations where children were engaged in sedentary/inactive behaviours and walking and active PA levels across the three evaluation years are presented in Tables 5 & 6 and Figures 2 & 3, with the results separated by boys and girls. For both groups, the highest observed sedentary/inactive behaviours were observed in the first evaluation year (62% in 2021, 46% in 2022 and 54% in 2023). A slightly lower percentage of walking and very active PA levels were observed for both boys and girls in 2023 compared to 2022 (34% and 20% in 2022 and 29% and 17% in 2023, respectively). This means that in 2023, both groups were less engaged in moderate-vigorous PA compared to 2022. The lowest very active PA level was observed for boys in 2023 compared to previous years (19%, 20% and 17% in 2021, 2022 and 2023, respectively).

Table 5: SOPLAY Camper Physical Activity Observations – BOYS

Physical Activity Levels	2021 % (95% CI)	2022 % (95% CI)	2023 % (95% CI)
Sedentary/Inactivity	61.3 (58.7, 63.9)	45.9 (42.6, 49.2)	54.4 (52.6, 56.3)
Walking	19.4 (17.3, 21.5)	33.7 (30.6, 36.8)	28.8 (27.1, 30.6)
Active	19.3 (17.2, 21.4)	20.4 (17.7, 23.1)	16.7 (15.3, 18.1)

The observed activity of youth is coded as:

- Sedentary/Inactivity – zero to low energy expenditure (i.e. lying, sitting, or standing still)
- Walking – moderate energy expenditure (i.e. walking)
- Very Active – high energy expenditure (i.e. running, jumping, or biking)

Figure 2: SOPLAY Camper Physical Activity Observations Visualization – BOYS

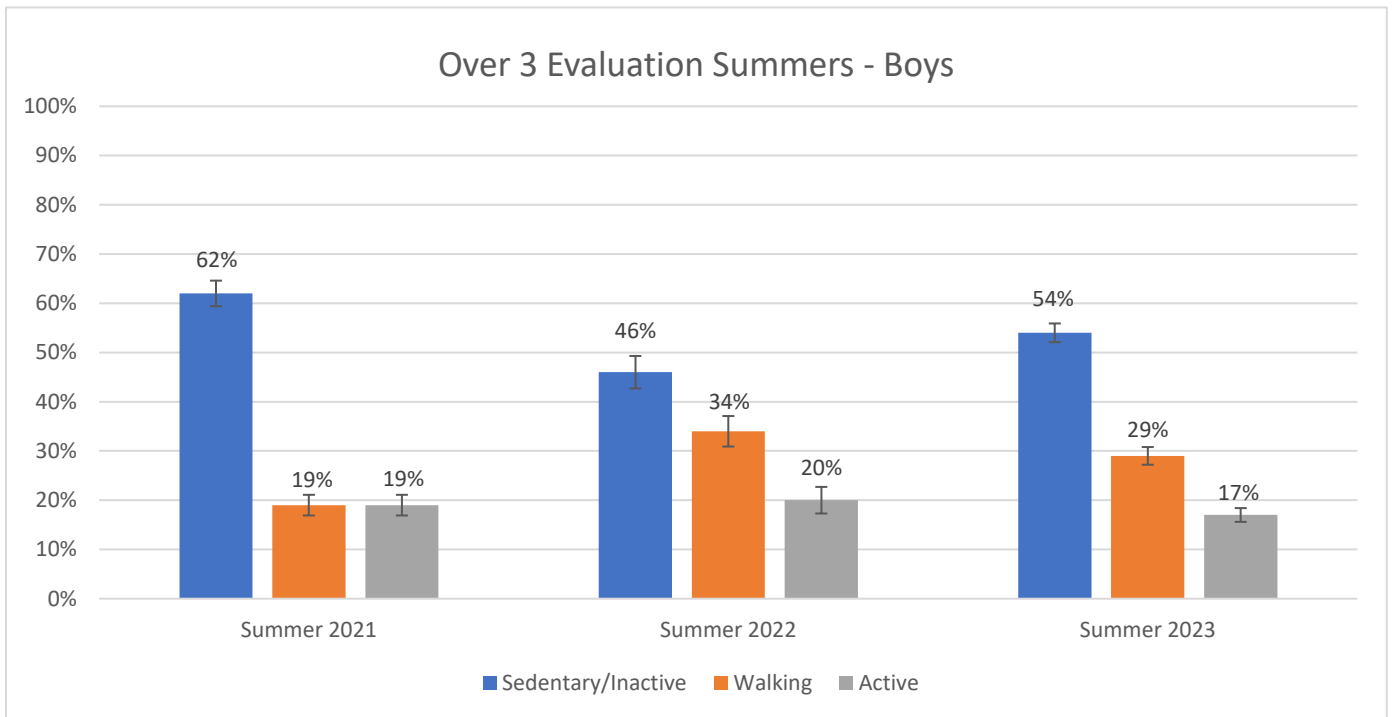


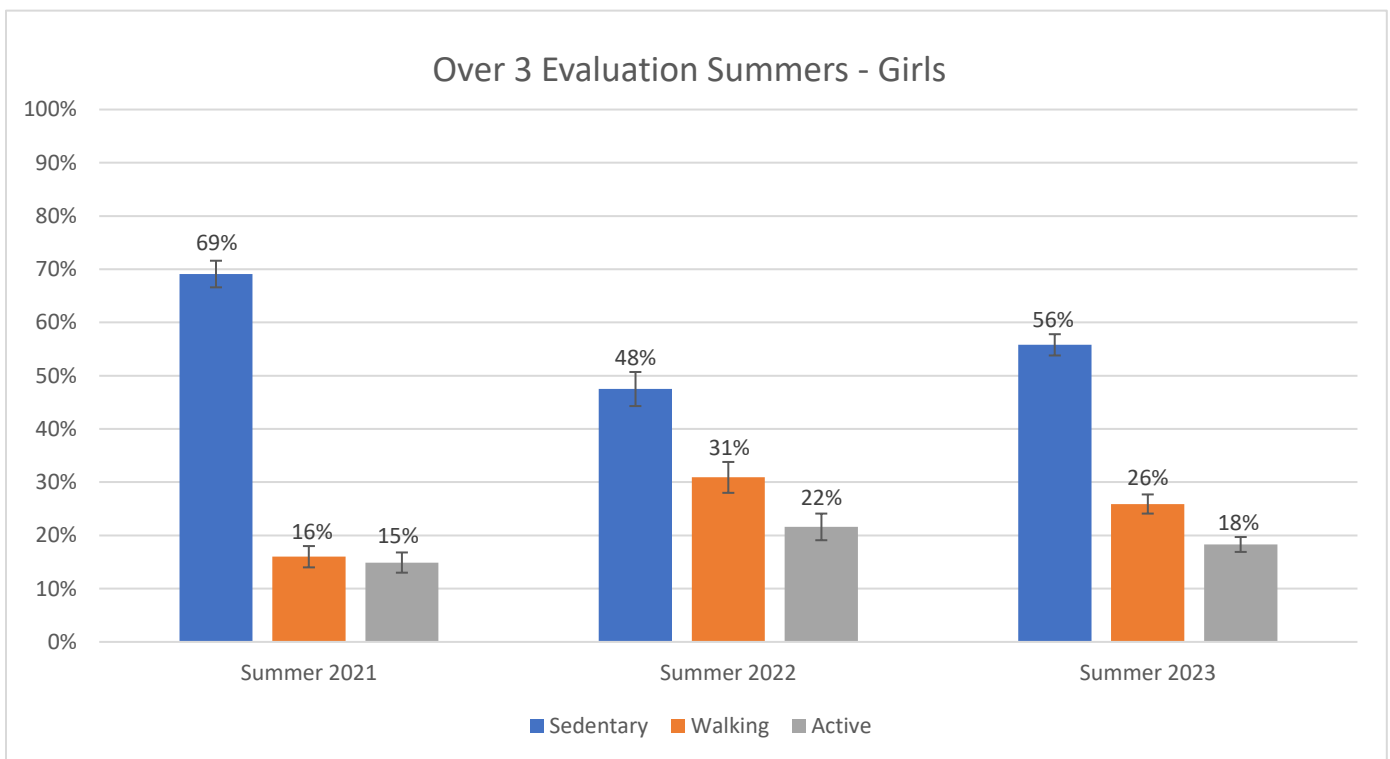
Table 6: SOPLAY Camper Physical Activity Observations – GIRLS

Physical Activity Levels	2021 % (95% CI)	2022 % (95% CI)	2023 % (95% CI)
Sedentary/Inactivity	68.2 (65.8, 70.7)	47.6 (44.5, 50.8)	58.3 (56.3, 60.3)
Walking	16.6 (14.6, 18.6)	30.8 (27.9, 33.7)	26.8 (25.1, 28.6)
Active	15.2 (13.3, 17.1)	21.6 (18.9, 24.1)	14.9 (13.5, 16.3)

The observed activity of youth is coded as:

- Sedentary/Inactivity – zero to low energy expenditure (i.e lying, sitting, or standing still)
- Walking – moderate energy expenditure (i.e. walking)
- Very Active – high energy expenditure (i.e. running, jumping, or biking)

Figure 3: SOPLAY Camper Physical Activity Observations Visualized – GIRLS



When comparing the PA results between boys and girls, based on the sedentary/inactive and walking results, boys were generally slightly more active and less inactive than girls, with slightly higher percentages of walking and lower percentages of sedentary activity across all three evaluation years. A higher proportion of girls were also observed to be sedentary across all three evaluation years compared to boys. The percentage of sedentary PA observed for boys ranged from 46% to 62%, while the range for girls was higher with 48% to 69%. This indicates boys were less inactive than girls. Additionally, the percentage of walking PA observed for boys ranged from 19% to 34%, while the range for girls was lower with 16% to 31%. This in addition to the sedentary activity comparison, indicates that boys were more active than girls. However, based just on the very active category of physical engagement, boys were observed to be engaged in a higher percentage of very active PA only in the first evaluation year (2021). Girls were engaged in a higher percentage of very active PA in the following evaluation years 2022 and 2023.

The combined PA levels of boys and girls separated by camp period (before first activity, before lunch and after lunch) and PA level are shown in Figure 4. It is further separated in Figures 5 & 6 by observed gender. When combined, the observations show that in 2023, a higher proportion of campers were inactive or sedentary during each of the observation periods (before first activity, before lunch, after lunch) in the camps compared to 2022. The sedentary/inactive levels were observed to be the highest in 2021 across all periods of the summer day camps. In 2022, a higher proportion of children are observed to be engaged in very active levels of PA in the first two observation periods (the first camp activity and before lunchtime) compared to other years. The opposite trend is observed for the first and third year of the evaluation, with very active levels of PA higher after lunch compared to before lunch and before the first activity. This means that in 2022, the most active time period occurred in the morning, whereas in 2023, the most active time was after lunch for boys and girls. This could be explained by a different order in activity programming within the camps for each year. Based on the observations, there were more free play opportunities in the morning in 2022 as in most cases, there was no planned activity because campers were still slowly funneling into camps. In 2023, there were more reported physically demanding activities such as sports and water-related activities in the afternoon following lunch. When separated by observed gender, boys are observed to lead in exhibiting very active levels before the first activity and after lunch compared to girls. The only

exception was in 2023, where girls were more active after lunch than boys. There are also mixed results during the period before lunch, with girls leading in observed very active levels in 2022 and 2023 and boys leading in 2021.

Figure 4: SOPLAY Camper Physical Activity Observations – By Observation Period and Activity Levels (Boys & Girls Combined)

Comparison by year of the camper physical activity separated by observation time period (Before First Activity, Before Lunch and After Lunch)

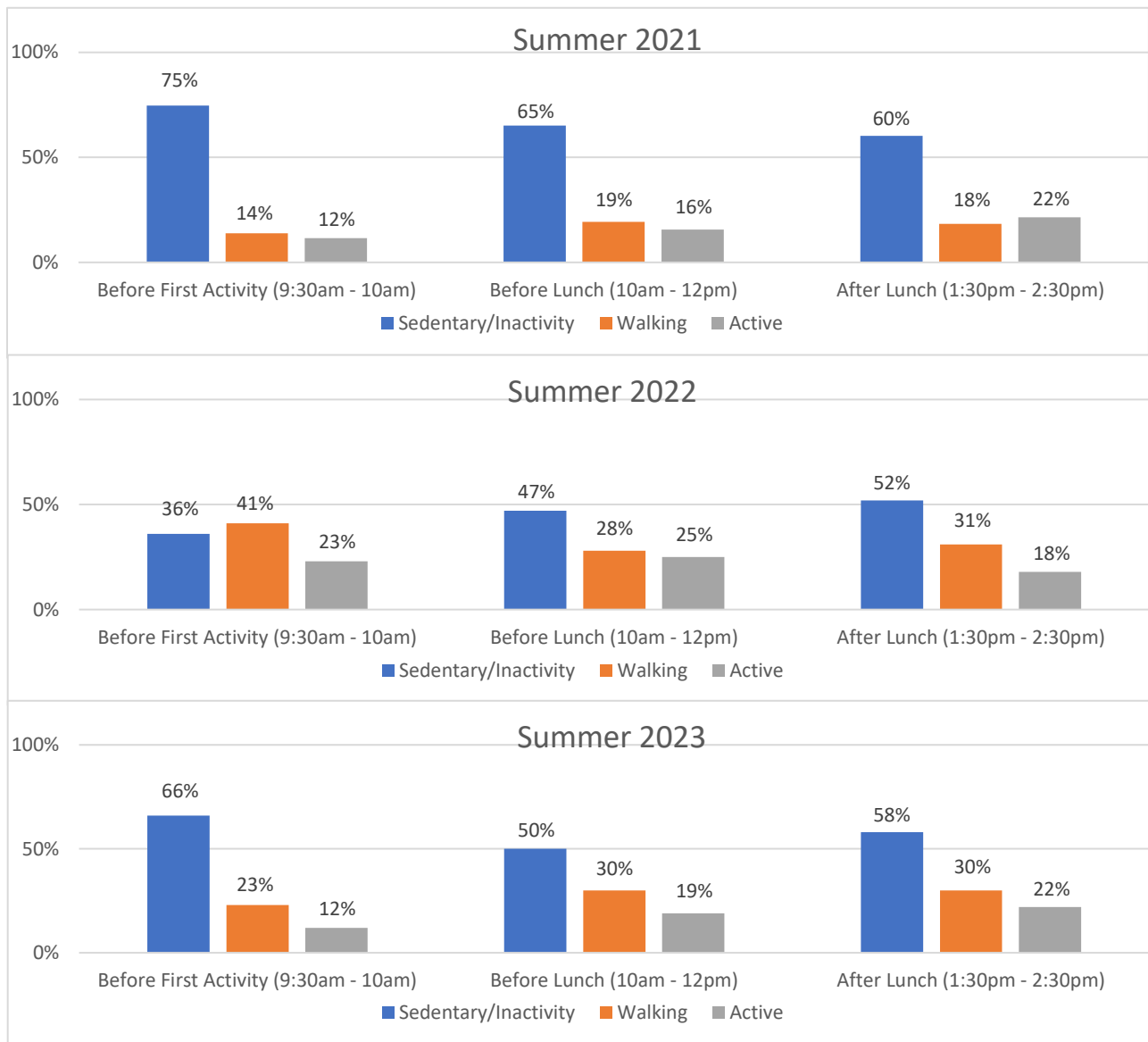


Figure 5: SOPLAY Camper Physical Activity Observations – By Observation Period and Activity Levels (Boys Only)

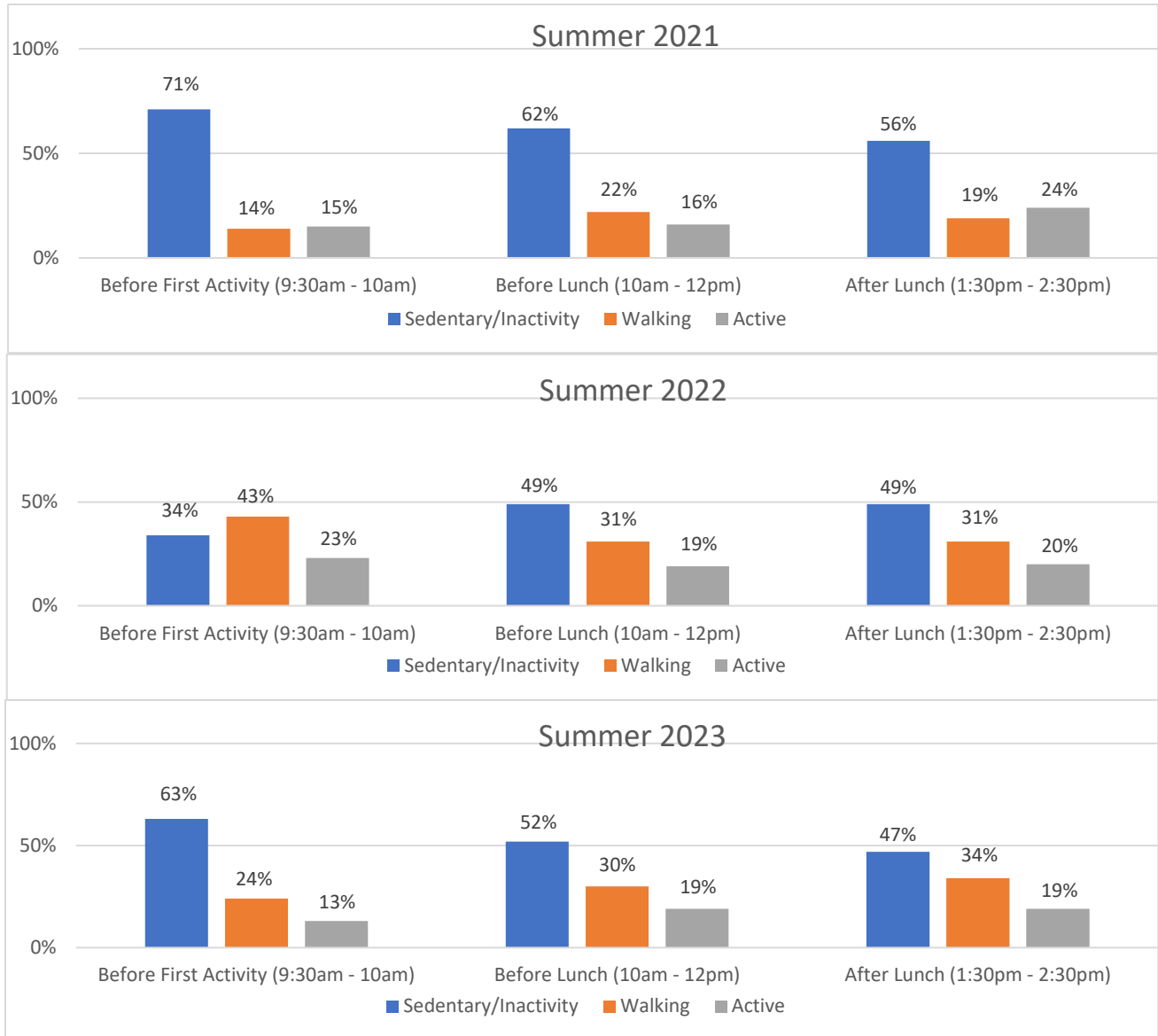
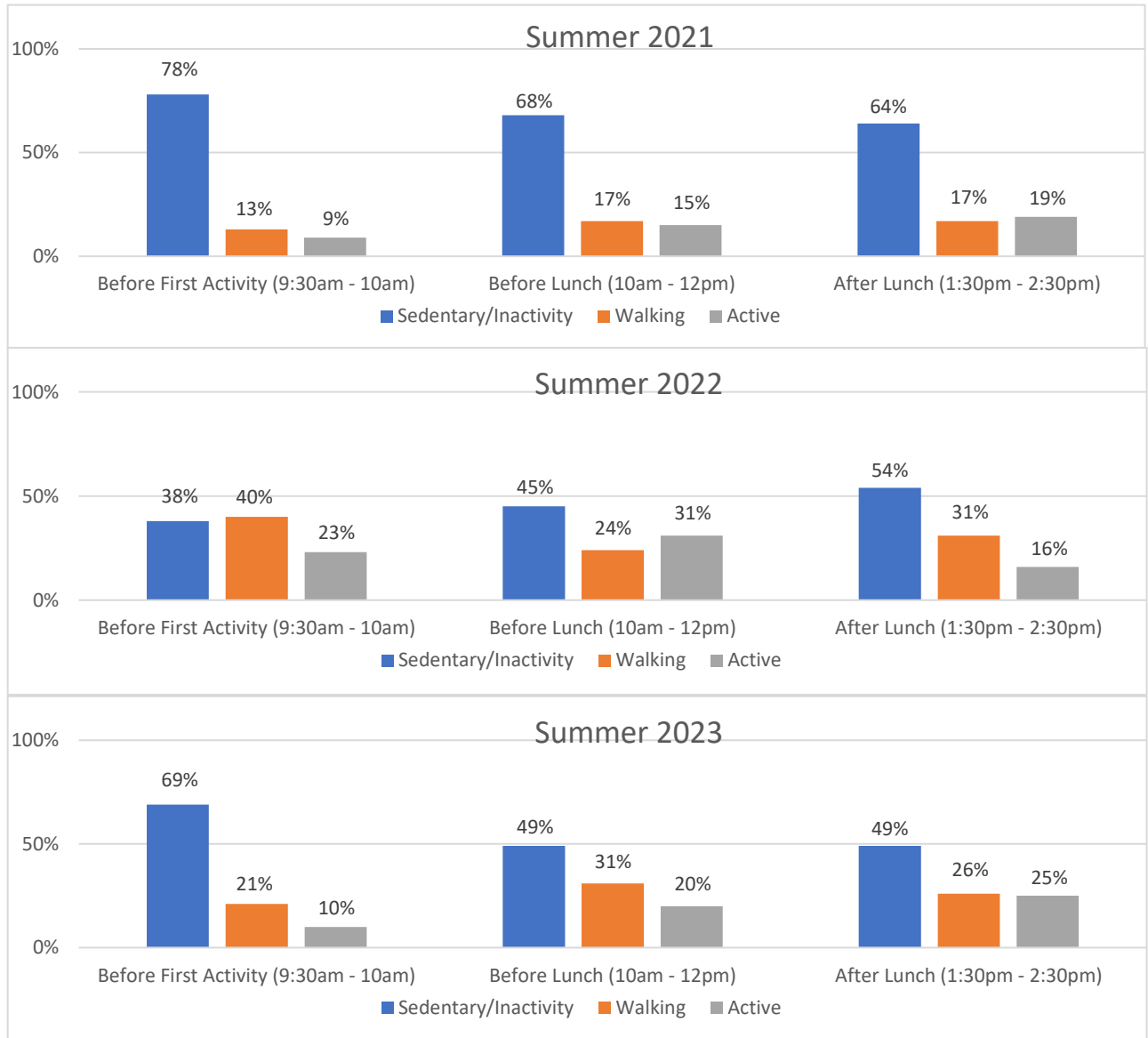


Figure 6: SOPLAY Camper Physical Activity Observations – By Observation Period and Activity Levels (Girls Only)



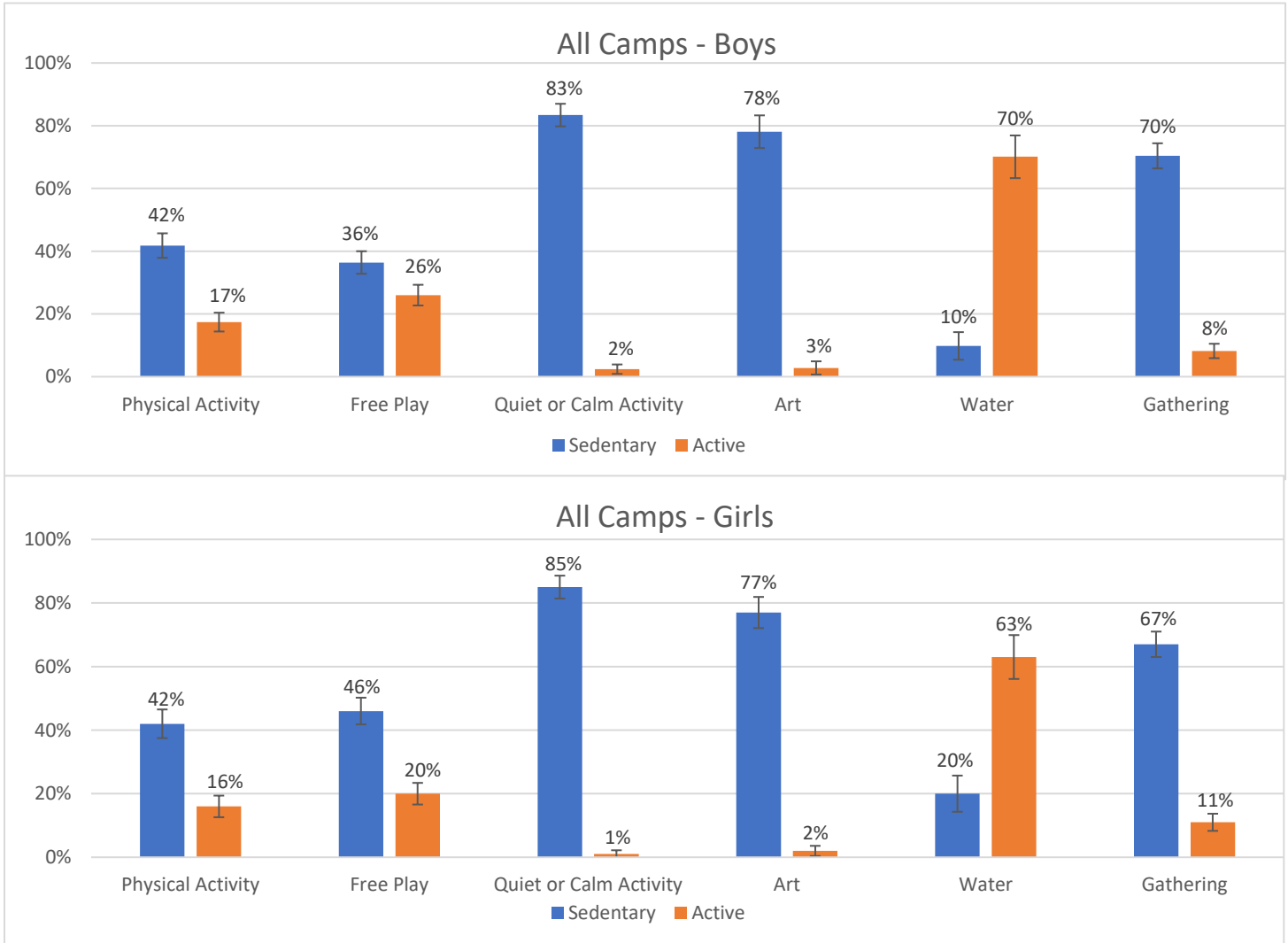
Supplementary Analysis 1: Camper Physical Activity Engagement by Activity Type in 2023

As previously mentioned, there was a modification to the protocol in the third evaluation year (2023), which introduced the reporting of an additional 7 different criteria related to the type of activity being observed. This includes Art Activity (i.e. arts and crafts), Water Activity (i.e. swimming and water-related playgrounds), Physical Activity (i.e. any PA organized by staff), Free Play (i.e. unorganized time where campers can play what they want), Gathering (i.e. assemblies and presentations), Quiet or Calm Activity (i.e. snack time, playing with toys and completing a puzzle) and Gardening Activity (i.e. activities related to an on-site garden). The results (Table 7 & Figure 7) show that for both boys and girls, quiet or calm, gathering and art activities have a very high percentage of sedentary/inactive behaviours exhibited by campers. This is as expected because these activities are not intended to be physically engaging. The highest very active levels of PA were observed to be the water-related activities. Additionally, there is a higher percentage of observed very active levels of PA for both boys and girls for free play compared to a planned PA by camp staff.

Table 7: Camper Physical Activity Observations (2023) – By Activity Type (Boys and Girls)

Scheduled Activity	Boys				Girls			
	Sedentary/Inactivity		Active		Sedentary/Inactivity		Active	
	2023	95% CI	2023	95% CI	2023	95% CI	2023	95% CI
Physical Activity	41.8	(38.0, 45.7)	17.4	(14.5, 20.4)	41.9	(37.5, 46.4)	16.3	(13.0, 19.7)
Free Play	36.4	(32.8, 40.0)	26.0	(22.7, 29.3)	45.8	(41.6, 50.0)	20.1	(16.7, 23.5)
Quiet or Calm	83.4	(79.8, 87.0)	2.4	(1.0, 3.9)	84.9	(81.3, 88.5)	1.3	(0.2, 2.5)
Art Activity	78.1	(73.0, 83.3)	2.8	(0.8, 4.9)	77.4	(72.5, 82.3)	1.8	(0.2, 3.4)
Water Activity	9.8	(5.4, 14.2)	70.1	(63.3, 76.9)	19.7	(14.0, 25.4)	62.8	(55.9, 69.7)
Assembly or Gathering	70.4	(66.5, 74.4)	8.2	(5.8, 10.5)	66.7	(62.2, 70.7)	10.5	(7.7, 13.2)

Figure 7: Camper Physical Activity Observations (2023) – By Activity Type (Boys and Girls)



Supplementary Analysis 2: Camper Physical Activity Engagement by Staff Engagement

An extra analysis was completed to determine the possible effects that staff engagement had on the campers' PA levels (Table 8 & Figures 8, 9 & 10). Based on the results, staff engagement was observed to have an effect on the level of PA performed by the campers. When staff were engaged in an activity with the campers, it was observed to lead to a decrease in sedentary activity and an increase in very active PA levels for both boys and girls. This means that children may be more encouraged to participate in physical activities if a counsellor or staff member is presently engaged as well.

Table 8: Camper Physical Activity Observations – By Staff Engagement (All 3 Evaluation Years)

Level of Staff Engagement	Boys						Girls					
	Sedentary/Inactivity			Active			Sedentary/Inactivity			Active		
	2021	2022	2023	2021	2022	2023	2021	2022	2023	2021	2022	2023
Engaged	63.3 (60.2, 66.5)	32.2 (28.8, 35.7)	48.1 (45.5, 50.7)	19.1 (16.5, 21.7)	41.7 (38.0, 45.3)	20.2 (18.2, 22.3)	71.9 (68.9, 74.8)	46.8 (42.6, 50.9)	50.8 (48.1, 53.5)	15.0 (12.7, 17.4)	23.5 (19.9, 27.0)	19.4 (17.2, 21.5)
Not Engaged	57.2 (52.7, 61.8)	52.5 (47.2, 57.9)	61.6 (58.9, 64.3)	19.7 (16.1, 23.4)	13.9 (10.3, 17.7)	12.8 (11.0, 14.7)	61.7 (57.4, 66.0)	48.9 (44.0, 53.8)	67.0 (64.1, 69.9)	15.5 (12.3, 18.7)	18.9 (15.0, 22.7)	9.4 (7.6, 11.2)

Figure 8: Camper Physical Activity Observations – By Staff Engagement (2021)

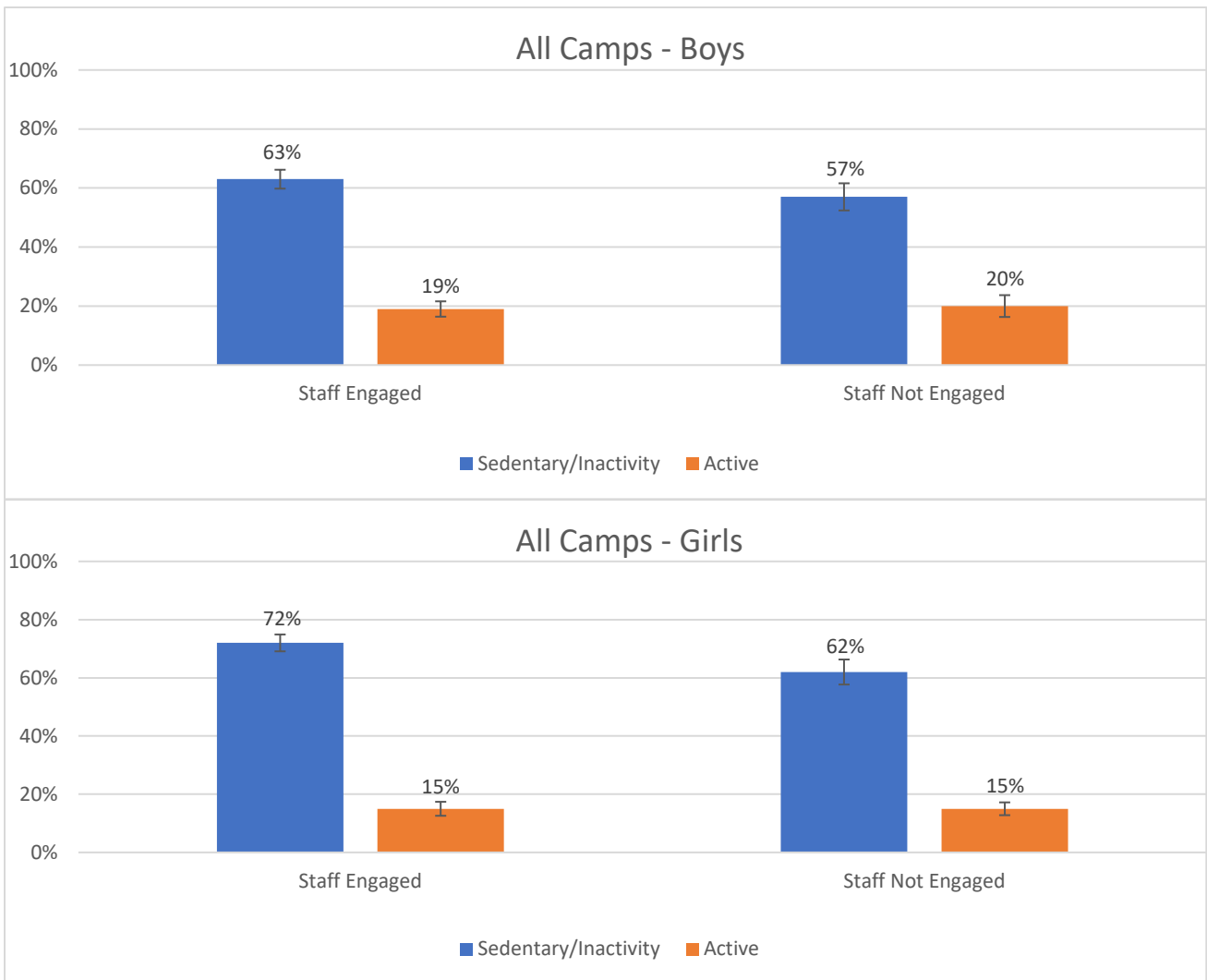


Figure 9: Camper Physical Activity Observations – By Staff Engagement (2022)

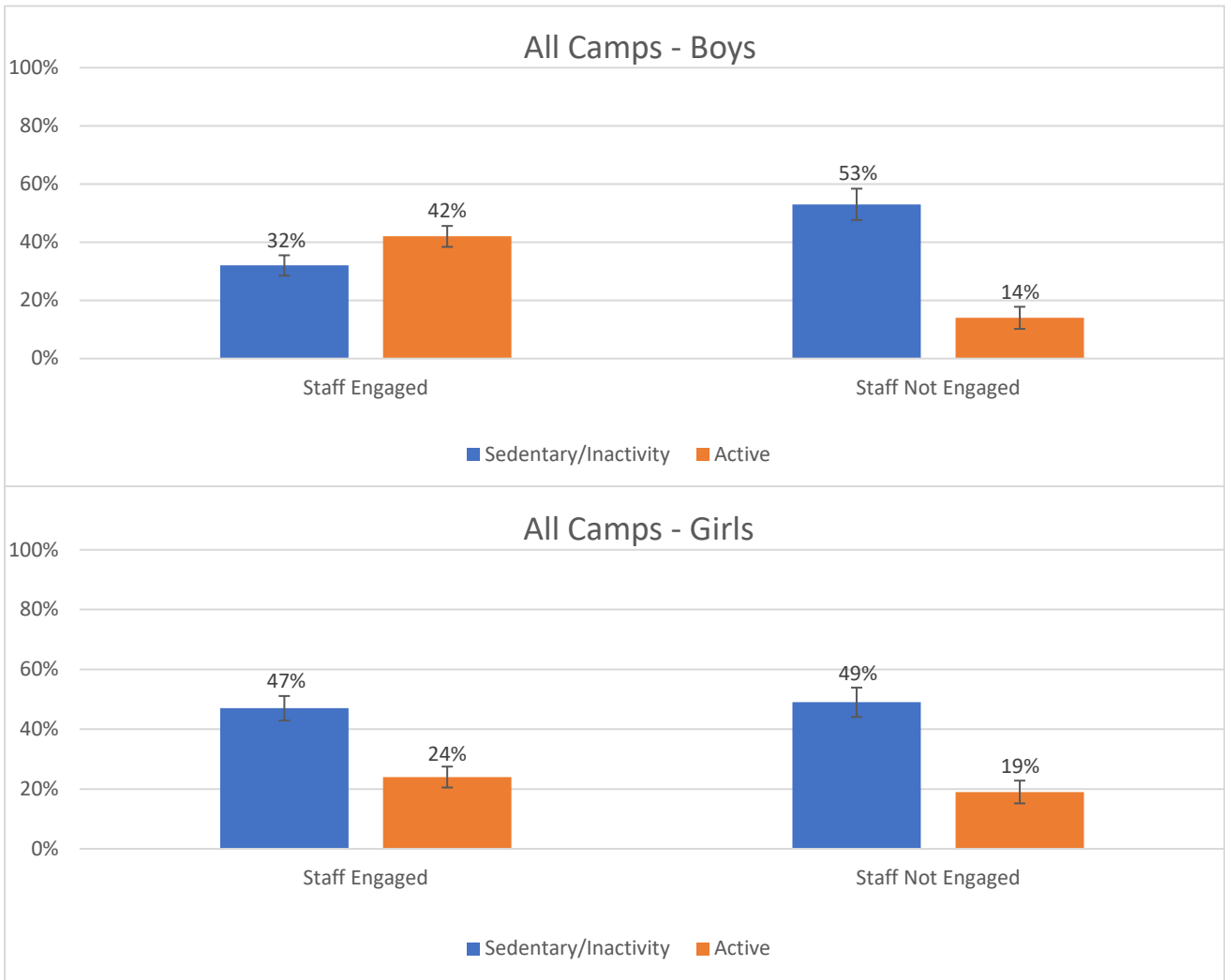
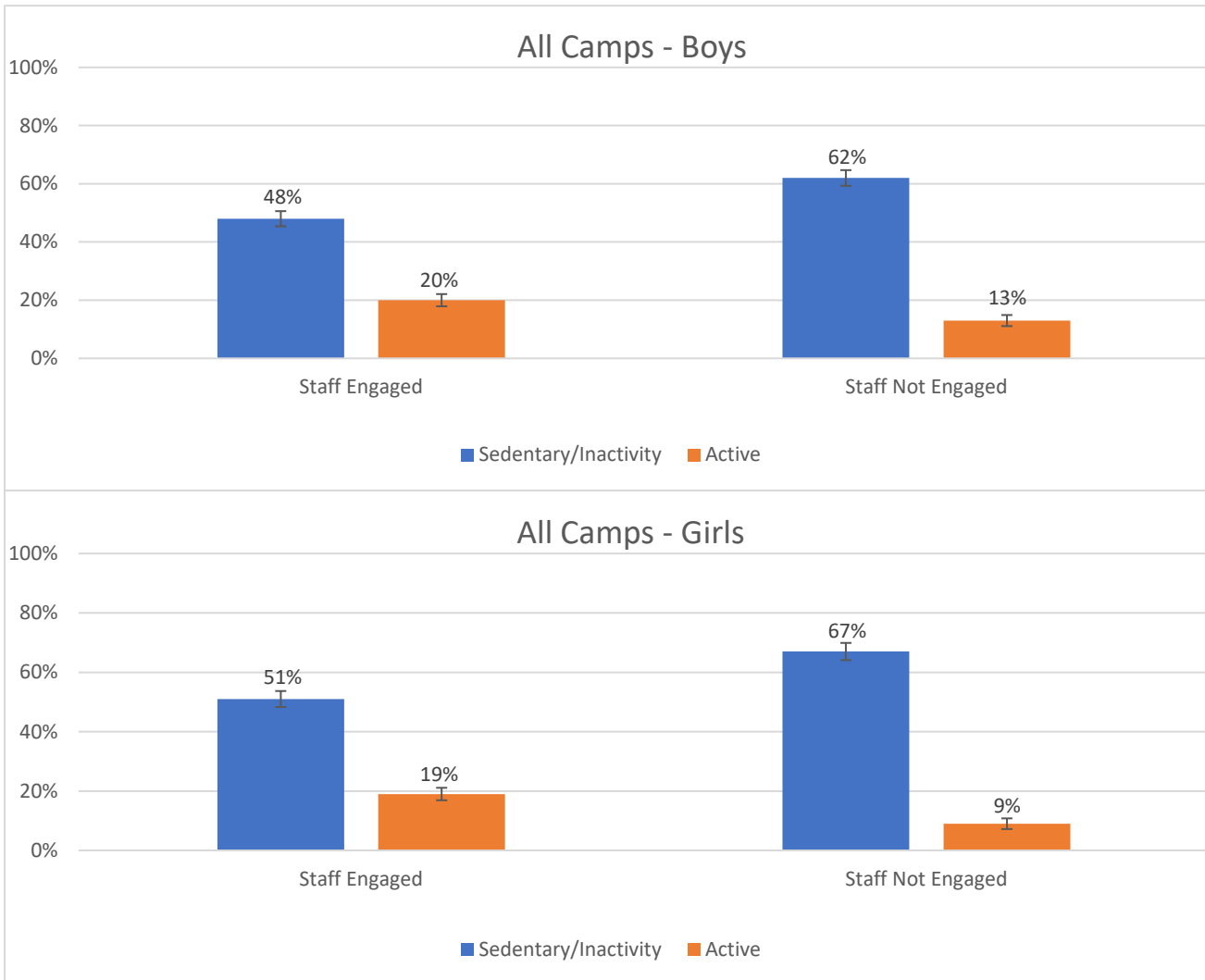


Figure 10: Camper Physical Activity Observations – By Staff Engagement (2023)



4.2.2 SOSPAN Results

Staff Physical Activity Management

Table 8 displays the mean percentages of the observed 10 criteria for the management of PA by camp staff. Approximately half of the observed activities in the first and second evaluation years involved idle time or downtime where children were uninvolved in a current activity or were awaiting further instructions (40% in 2021 and 56% in 2022). This percentage was even higher in the last evaluation year (70% in 2023). The percentage of activities that included elimination games was low across all three years (8%, 16% and 6% in 2021, 2022 and 2023, respectively) as well as activities where children stand in line, waiting for their turn (21% in 2021, 9% in 2022 and 8% in 2023). Almost no activities across the three evaluation years,

were there observations that were considered to be unsafe (0%, 3% and 0% in 2021, 2022 and 2023, respectively). A higher percentage of choice was provided in 2023 compared to previous years for engaging in physical activities (8% in 2021, 7% in 2022 and 30% in 2023). This is likely due to a greater number of observed 'free play' activities offered to children in 2023 compared to previous years. There were no observations in which small-sided games were observed. This is likely attributed to the restrictions put in place at summer camps following the COVID-19 pandemic, where nearly every group of children was already assigned to smaller groups so the further division of groups for several smaller games instead of one large game was unnecessary. A higher percentage of campers were observed to be given more choice in terms of participating in a PA or remaining sedentary/inactive in 2023 compared to previous years (21% and 13% in 2021 and 2022, respectively compared to 36% in 2023).

Table 8: SOSPAN Camp Staff Physical Activity Management Observations

Variable	Definition	Evaluation Year		
		2021 (%)	2022 (%)	2023 (%)
Staff giving Other Instructions	Staff are giving instructions (ie, other than PA instructions) to children.	68.3 (61.2, 72.7)	13.8 (7.5, 19.9)	20.3 (15.5, 25.4)
Staff Disciplining Children	Children are being disciplined by staff.	76.8 (71.9, 82.2)	18.1 (11.0, 24.9)	18.0 (13.8, 23.2)
Idle time	Children are not engaged in any specific activity and are awaiting instructions from staff.	39.8 (30.7, 42.5)	55.6 (46.6, 64.6)	70.3 (64.3, 75.5)
Children Stand in Line for Turn	Children stand and wait their turn to play/participate in PA.	21.2 (14.6, 24.3)	9.4 (4.1, 14.7)	7.8 (4.5, 11.0)
Elimination Game	Game eliminates children from PA opportunities as it progresses.	8.1 (5.5, 12.4)	16.2 (9.6, 22.9)	5.9 (3.3, 9.1)
Choice of PA Provided (>2 activities)	Children have a choice of PAs in which to participate in.	8.1 (4.8, 11.5)	6.8 (1.7, 10.3)	30.1 (24.2, 35.3)
Choice of PA or Sedentary/Inactive	Children have a choice of doing the activity or not doing the activity or resting.	21.2 (11.8, 20.9)	12.8 (6.8, 18.9)	35.9 (29.7, 41.4)
PA Unsafe	Children are at risk for being injured (eg, danger of colliding with each other or hit with equipment).	0.3 (0, 1.2)	2.6 (0.0, 5.4)	0
Small-Sided Game	Children are divided into several small games instead of one large game.	0	0	3.9 (1.5, 6.2)
Rules Modified for PA	Staff modified the rules of an active game to maximize children's PA (eg, eliminated lines).	1.9 (0.3, 3.6)	0	0

Staff Physical Activity Behaviours

The mean percentages of the observed 8 criteria of the PA behaviours exhibited by camp staff are presented in Table 9. Results across the three evaluation summers show moderate staff engagement in PA (63% in 2021, 50% in 2022 and 46% in 2023), meaning that in only about half of the observed activities, staff were a part of the activities and not just instructing or supervising. A lower percentage of staff engagement in 2023 could be attributed to a greater number of ‘free play’ activities observed compared to previous years. Additionally, there was also a very high level of supervision by staff (99%, 82% and 85% in 2021, 2022 and 2023, respectively) and a very low percentage of observed discouragement of PA by staff towards campers (3% in 2021, 1% in 2022 and 2% in 2023). Based on the observations, there was a low percentage of withholding PA by staff (2%, 14% and 10% in 2021, 2022 and 2023, respectively) and almost no counsellors were performing other tasks (i.e. preparing for the next activity) or were off-task (i.e. using their cellphones). Lastly, the verbal promotion of PA directed at campers by camp staff (i.e. “good job”, “keep going”) was low across all three evaluation years (21% in 2021, 5% in 2022 and 4% in 2023).

Table 9: SOSPAN Camp Staff Physical Activity Behaviours Observations

Variable	Definition	Evaluation Year		
		2021 (%)	2022 (%)	2023 (%)
PA Instruct/Lead	Staff member is instructing children about physical activity or leading activity but not directly participating.	77.2 (16.4, 26.4)	23.1 (15.4, 30.7)	27.7 (22.7, 33.7)
Staff Engaged	Staff member is engaging in the activity or participating.	63.3 (60.4, 71.9)	50.4 (41.4, 59.5)	46.1 (39.5, 51.6)
Supervise	Staff member is present and monitoring children.	98.8 (96.4, 99.7)	82.1 (75.1, 89.0)	84.8 (80.6, 89.3)
Unrelated: Other Task	Staff member is present but is engaged in behaviours related to their duties as a staff member (eg, setting up next activity).	0.5 (2.7, 8.2)	2.6 (0.0, 5.4)	18.0 (13.1, 22.4)
Unrelated: Off Task	Staff member is present but is engaged in behaviours other than their duties related to the camp or monitoring children (ie, texting/using their phone, backs turned to children).	0.4 (0.0, 1.9)	11.1 (5.4, 16.8)	2.3 (0.5, 4.2)
PA Promote	Staff member verbally promotes PA (eg, “good job,” “keep going”).	20.8 (13.2, 22.6)	5.1 (1.1, 9.1)	3.9 (1.8, 6.7)
PA Discourage	Staff member verbally discourages PA (eg, “stop running,” “slow down”).	2.7 (0.7, 4.7)	0.9 (0.0, 2.5)	1.6 (0.0, 3.1)
Withholding PA	Staff member removes a child from PA or threatens to remove a child from PA as a consequence for certain behaviours.	1.5 (0.5, 4.2)	13.7 (7.5, 19.9)	9.8 (6.1, 13.3)

Staff Healthy Eating Behaviours (Nutrition & Food Handling)

There was one lunchtime observation scan conducted for every scheduled visitation day completed at the participating camps, totaling 35 scans across the three evaluation years. The results are represented in Table 10 as the mean percentages of the observed seven criteria for the nutrition and food handling behaviours exhibited by camp staff. HE and nutrition was verbally promoted by camp staff in less than half of the observations, with an even lower percentage of this behaviour observed in 2022 and 2023 (42%, 22% and 13% in 2021, 2022 and 2023, respectively). In around half of the observations in the first two evaluation years, staff were observed to be providing HE education, where snack options and nutrition content was discussed (42% in 2021 and 56% in 2022). This behaviour was observed much less frequently in 2023 (7% in 2023). This means that in 2023, only around 10% of the observations reported staff educating campers during lunch about nutrition and promoting HE. A high percentage of staff were observed to be visibly eating fruits/vegetables in front of campers during scheduled lunchtime (36% in 2021, 56% in 2022 and 67% in 2023). A higher percentage of staff were observed to be eating food other than fruits and vegetables in 2023 compared to previous years (30%, 67% and 93% in 2021, 2022 and 2023, respectively). This may not necessarily be a bad result because a sandwich or other meal counts as non-fruit/vegetable. This is similar to non-water beverages as staff may be drinking an electrolyte such as Gatorade or fresh juice or carbonated water. During the majority of time, counsellors visibly drank water in front of the children (92%, 100% and 73%, in 2021, 2022 and 2023, respectively) and ensured safe food handling (100% in 2021 and 2022 and 60% in 2023) via hand washing and cleaning the designated eating areas during lunch. However, staff drinking water and safe food handling percentages were observed to be much lower in 2023 than in previous years.

Table 10: SOSPAN Camp Staff Nutrition Behaviours & Food Handling Observations

Variable	Definition	Evaluation Year		
		2021 (%)	2022 (%)	2023 (%)
Nutrition Promote	Staff member verbally promotes healthy eating.	41.7 (13.8, 69.6)	22.2 (0.0, 49.4)	13.3 (0.0, 42.9)
Nutrition Education	Staff member is educating children about healthy snack options (eg, talking about nutrition content of snacks and meals).	41.7 (13.8, 69.6)	55.6 (23.1, 88.0)	6.7 (0.0, 20.6)
Staff Eating NON-Fruit/Veg	Staff member is eating, has food in their hand or in their vicinity in the presence of children.	30.0 (0.5, 49.5)	66.7 (35.9, 97.5)	93.3 (79.4, 100)
Staff Eating Fruit/Veg		36.4 (6.7, 60.0)	55.6 (23.1, 88.0)	66.7 (31.2, 83.1)
Staff Drinking NON-Water	Staff member is drinking, has a cup in their hand or in the vicinity in the presence of children.	8.3 (0.0, 24.0)	66.7 (35.9, 97.5)	73.3 (47.8, 95.1)
Staff Drinking Water		91.7 (40.0, 93.3)	100	73.3 (47.8, 95.1)
Safe Food Handling	Staff are observed practicing safe food handling techniques (eg, washing hands before serving food).	100	100	60.0 (31.2, 83.1)

4.2.3 Reliability

Reliability for SOPLAY and SOSPAN were estimated via Cohen's Kappa and Interclass Correlations (ICCs), where appropriate for each pair of observers. The results of the inter-rater reliability analysis for the three evaluation years (Summer 2021, 2022 and 2023) indicate there is excellent agreement between observers, with ICCs and Cohen's Kappa values greater than 0.9. The exact values can be seen in Tables 12, 13 & 14 in Appendix J.

5. Discussion

The purpose of this study was to investigate how TS' Power Up intervention was implemented in the summer day camp setting and how it shaped the camp environment for developing healthy habits in children and youth. The findings from this study will provide insights into the study of camper and counsellor outcomes. Specifically, the aim of this study was to answer the proposed research questions; 1) How do camp administrators, coordinators and counsellors implement the activities promoted by Power Up in summer day camps? 2) How does the training and supports provided from TS shape the camp environment through the leadership by counsellors and the PA of campers? These research questions will be answered in the following discussion by synthesizing the results of the observations and interviews. This mixed methods study is unique in that it assessed a summer day camp intervention using a combination of observational data and semi-structured, online interviews.

5.1 Research Question #1: Implementation of Power Up on Camp Programming

In addressing the first research question, the interview themes indicated that training and resources provided by Power Up supported staff to create a healthy environment in the day camp setting for the promotion of PA and HE. From the interviews, it was clear that the training provided by TS enabled camp staff to learn and familiarize themselves with the tools and resources available to implement activities in the day camp setting to promote PA and HE. This helped them with daily programming and provided ideas on ways to promote healthy habits. Another theme highlighted the benefits that occurred at the camp level that could be attributed to staff implementation of activities promoted by Power Up. A major focus of the training provided by TS was in inclusion of all campers in all activities. Camp staff learned to diversify and modify activities to promote inclusion of all campers to support a healthy camp environment. Specifically, a modification that was mentioned in the interviews was the removal of elimination games. In a study on the effects of elimination games on children's PA and psychosocial responses (Foster & Behrens et. al, 2010), researchers found that children aged 12-14 from a 1-week community fitness day camp spent 13% more time in MVPA during non-elimination games compared to elimination games. This supports the concept that the removal or reduction of elimination games would directly contribute to increases in active levels of PA and participation in activities led by counsellors. TS also provided resources through access to online

and in-person materials. The online database and the various forms of PA information were readily available to camp staff, used for inspiration and activity planning. Additionally, there were also provisions from TS that directly assisted counsellors in implementing HE-related activities during camp. One such example was food cards which teach campers about food groups. These cards were integrated into a game to challenge camper knowledge and learn about healthy food options.

The interviews also provided context on the many challenges that prevented camp staff from implementing Power Up, as outlined in the fourth theme – Challenges with Power Up Implementation. Usage of the materials and resources for activities provided by TS was dependent on the staff's desire to use them. Many camps conducted their training shortly before the first day of the summer day camps and many counsellors were trained about the Power Up program indirectly, meaning they received information about Power Up's resources and content second- or even third- hand from coordinators or administrators who attended the yearly Power Up summit and training directly. Romero & Bedoya et. al (2022), conducted a large-scale impact evaluation across 1,198 public primary schools in Mexico to study the impact of providing schools directly with a professional training model versus indirectly with a cascade-style training model. Eligible schools were randomly assigned to one of the two groups. In the direct training group, school principals received managerial training directly from a team of professional trainers. Whereas in the indirect training group, only 10% of the supervisors received the managerial training, who then trained the rest of the other supervisors, who in turn provided training to the school principals for that group (Romero & Bodeya et. al, 2022). Their results indicated that the direct training model significantly improved the school principals' managerial capacity compared to the indirect training offered (0.13σ increase, p -value=0.018). Indirect training can pose a barrier to program implementation by staff as the information may be diluted as it is passed down and is largely dependent on the level of interest in the program that the trainer (typically a camp coordinator) has. If the administrator or coordinator that oversaw the training for the counsellors was not interested in the program or its content, it was not likely that the counsellors would implement the program and its materials into activity planning. Additionally, camp staff need time to become familiar with the provided tools and incorporate them into activity planning. This was difficult to do with a lack of free time during camp, especially if training is completed shortly before the start of the camps. Another challenge in

implementing the program and its activities was the language barrier hindering English-speaking camps. As previously mentioned, the organization is based in Quebec, Canada and a majority of the camps are French-speaking. However, with their outreach goals to reach other provinces in Canada, the number of English-speaking camps continues to grow. In the interviews, it is mentioned that accessing English resources is a persistent issue and therefore, program uptake and usage for these camps was a barrier.

SOSPAN observations documented how counsellors delivered the intervention in the camp setting. This was exemplified by the observed results for the management of PA and the nutrition and food handling behaviours by staff. Of the 10 PA management variables assessed during summer day camp visits, 4 were observed to have positive results, and 3 were observed to have less than favourable results across the three evaluation years. More specifically, the positive results included low percentages of the following: staff disciplining children, children standing in line for a turn, elimination games and unsafe physical activities. In a process evaluation of an afterschool intervention on child activity levels by Hughey & Weaver et. al (2014), using the same validated tool SOSPAN, the researchers noted that less than 10% of children were observed to be standing in line for a turn and participating in elimination games. This is similar to the observation results in this study. In contrast, the less favourable results included high percentages of campers being idle and campers being provided a choice of PA or sedentary behaviour which occurred in all three evaluation years. In the first two years, there was a low percentage of a choice of two or more different physical activities provided during the observations. In a study on the effects of choice on student motivation and PA (Ward & Wilkinson et. al, 2005), Ward & Wilkinson showed that increased camper autonomy in PA selection also increased self-determination and motivation to participate in physical activities at camp. Encouraging camp staff to provide multiple options for physical activities for campers will increase active participation. However, it is important to meet camps where they are at and understand that every camp is different and has different needs. Thus, offering a variety of options and activities for campers will help different camps meet their needs.

In terms of the HE observations, of the seven nutrition and food handling behaviours assessed during lunch-time at the summer day camps visited, three were observed to have positive results, and two were observed to have less than favourable results across the three evaluation years. The positive results included: a high percentage of staff observed to be drinking

water and eating fruits and vegetables in front of campers as well as practicing safe food handling, which includes washing hands and sanitizing spaces where the campers would eat. These observed behaviours that were exhibited by the camp staff indicate support of the implementation of Power Up. An important aspect of the program and its training is to teach counsellors to go beyond presenting activities and ideas but to also act as role models for the campers (Tremplin Sante, 2022). In a study about camp counsellors serving as role models for social and emotional learning skills in overnight camps (Owens & Browne, 2021), the researchers suggest that the relationship shared by campers and counsellors provides opportunities for children and youth to witness and practice social and emotional learning. The less favourable results included a low percentage of observed nutrition promotion and nutrition education, with the lowest percentages observed in 2023 (less than 15%). This means that there were very few instances where staff were observed to be verbally promoting HE and educating children through discussion of snack options and nutrition content at camp. Although staff may have been serving as good role models, these results indicate they were not as proactive in engaging with campers about HE. This is a result commonly observed in the literature. The professional development training evaluation conducted by Weaver & Beets et. al (2014) reported staff verbal promotion and education of HE in less than half of their observations across two years.

5.2 Research Question #2: Influence of Training and Supports from La Fondation Tremplin Santé on the Camp Environment

Themes from the interviews indicated the way training and supports provided by TS shaped the camp environment and camp leadership in a positive direction.

There are many ways in which the foundation provides support, as described in the second theme (Supports provided from Power Up) of the thematic analysis of the interviews. The Foundation provided resources such as equipment directly to camps which broadened the range of activities possible for camps to complete. Funding opportunities were also made available through TS to assist summer day camps with daily activity programming by allowing them to afford and obtain new equipment. Funding also enabled camps to implement HE workshops. The organization also encouraged camps to participate in diverse PA and HE challenges that offered rewards to incentivize both campers and camp staff to participate. Direct assistance through

readily available lines of communication and open dialogue with PA and HE professionals was also provided by TS. This created a positive relationship with individual camps and communities and also benefited camps in activity planning. Additionally, the training that TS provided to camps was mostly positively received. It was noted that it was practical and dynamic and paved the way for the development of new working habits among counsellors. This had an impact on the camp environment as it encouraged program usage in activity planning. As outlined in theme #3 (Benefits of Power Up at the Camp Level), the training provided by TS also influenced the leadership of counsellors through their decision-making process. It gave staff new perspectives and opened discussions addressing delicate subjects such as body image with a focus on inclusion for all. In a study about the experiences of body dissatisfaction among youth and adolescents in an overnight camp setting, researchers found that females with a positive perception on a camp environment related to body image and body change behaviours were encouraged to be more physically active at camp and unafraid to eat food and snacks (Linder & Russel-Mayhew et. al, 2012).

Throughout the interviews, it was clear that there were barriers that prevented TS from positively shaping the camp environment, the leadership of counsellors and the PA of campers. Described in the fourth theme (Challenges with Power Up Implementation), many of these barriers relate to a lack of support from the Foundation or limited uptake of training content. Contrary to previous interview evidence, some interviewees recall not receiving enough direct support from TS. Some interviewees noted that communication between their camp and the Foundation was not open, and these staff members had to refer to the online website if any problems were to arise. This lack of communication may have contributed to the program's decreased presence and importance in the participating camp setting. However, the organization's lack of presence may be attributed to the number of participating camps, as it would not be possible to always offer the same level of direct support to every camp. As of 2023, 1185 registered summer camps were participating in the Power Up intervention (Tremplin Sante, 2023). TS' primary focus was on assisting new camps to integrate into the program, rather than being present to assist camps that have already committed to participating in Power Up for more than one year. Another potential barrier to the program's influence on the camp environment is a lack of uptake of Power Up supports. This may have been related to the training received by Power Up. For example, interviewees expressed concern over the training content. Some found it

to be too childish, with an emphasis on fun elements tailored to a younger audience of counsellors rather than focusing on important concepts and key messages. Others found it difficult to put the training into practice as it was completed remotely and online. If the training does not appeal or interest camp staff, it will not influence the camp environment and therefore, its tools cannot be put to use for activity planning. One challenge may be that the training was targeted to counsellors, but most of the participants were actually higher-level camp staff such as administrators who needed to convey the information to the counsellors following the training. It should be further emphasized who each training is targeted to. Higher-level camp staff should be provided with training on how to train their own staff to make full use of the resources offered by the program and how to access its tools, so that the administrators and coordinators could serve as their own Power Up ambassadors. Overall, the interviews indicated that while some camps benefited from the training and supports, others described challenges to their interest and use of the program materials.

The observation results displayed the environment of the camp setting including whether tools and challenges that were emphasized in training were used by camp staff. The observations also included the modelling behaviours of camp staff, the play areas in which physical activities occur, and the PA levels of campers observed at participating summer day camps. Of the eight PA modelling behaviours assessed during the summer day camp visits, three were observed to have positive results, whereas two were observed to be less than favourable across the three evaluation years. The positive results included very high percentages of supervision by camp staff and low percentages of staff off-task and discouraging PA. This means that most of the observations documented staff actively monitoring the campers and very few of the observations showed camp staff engaged in behaviours unrelated to the camp duties and verbally discouraging campers from being involved in PA. The less favourable results included a low percentage of staff engagement and PA promotion. Around half of the observations had staff engaging in physical activities with the campers and less than 20% of the observations had staff verbally promoting and encouraging PA. Looking at the results of these staff modelling behaviours can provide insight into the influence that TS has on shaping the camp environments. The results indicate that the staff from Power Up participating camps adhere to the training and fulfill their duties as counsellors through supervision and being present and on-task, however, they are often

times lacking that extra step of serving as role models through engagement and active encouragement of PA.

The area observation results across the three evaluation years indicated that the environments of TS supported summer camps were conducive to play and activity programming. Almost every observation of the camp environment was considered accessible and usable, and a high percentage of observed areas were supervised and organized.

Camper PA levels were observed using the validated, time-sampling tool SOPLAY (Saint-Maurice, Welk, Ihmels & Krapfl, 2011). The results from these observations were generally positive, indicating acceptable levels of active PA levels displayed by campers. The results from this evaluation align with the results of a series of similar evaluation studies involving the use of the same validated, time-sampling tools to assess the effects of a competency-based training intervention on the PA promotion of staff and the PA levels of children in a summer day camp setting (Weaver, Beets, Turner-McGrievy, Webster & Moore, 2014, Weaver, Beets, Saunders & Beighle, 2014). The observation data from this study aligns with the results of Weaver & Beets et. al (2014) in support of the trend where boys were observed to be more active and less inactive than girls. In both research studies, boys were observed to be engaged in MVPA 2-6% more during physical activities than girls.

Camper PA levels by activity type and camper PA levels by staff engagement across the three evaluation years was conducted. In analyzing the PA levels of campers for boys & girls based on activity type, both were observed to have the same trends. Activities that were not intended to be physically engaging such as quiet or calm, gathering/assembly or art activities have a higher percentage of boys and girls observed to be sedentary. Water-related activities were where the highest levels of very active PA were observed. A higher percentage of very active levels of PA was observed during activities classified as free play compared to physical activities organized by camp staff. These findings are consistent with other studies. For example, a similar study done by Weaver & Beets et. al (2014) on a professional development training program that used the same observation tools to assess the effects of their training intervention, they found that boys and girls were more engaged in moderate-to-vigorous PA during free play compared to organized physical activities. Additionally, across their three evaluation years, they found that the smallest percentage of sedentary children and the highest percentage of children engaged in moderate-to-vigorous PA occurred during water-related activities (Weaver & Beets

et. al, 2014). The results of both studies support the concept that free play and water-related activities encourage greater PA levels in children and youth. In 2023, over half of the observed activities were classified as PA (organized PA, free play & water-related). This means that Power Up camps implemented an appropriate balance between physical activities and sedentary activities (e.g. arts and crafts), which may be attributed to TS' training and supports in the form of activity planning assistance.

As was previously mentioned, camp staff were only participating in activities with their campers in approximately 50% of the observations across the three evaluation years. Although it means they were moderately engaged, it may not be enough to benefit the campers. In analyzing the PA levels of the campers based on staff engagement for both boys and girls, the results show higher percentages of very active levels of PA and lower levels of sedentary behaviours when staff were engaged in both 2022 and 2023. In 2021, campers were equally very active regardless of staff engagement. Riciputi & McDonough et. al (2019) did a study on the perceptions of youth from low-income families on staff and its effect on behavioural engagement in physical activities. They found a positive association between staff support and youth engagement in PA ($\beta = .69, p < .001$). These results suggest that children and youth are more encouraged to participate in physical activities if a counsellor or staff member is engaged as well.

5.3 Recommendations

5.3.1 Recommendations for Future Research

Based on the results of this study, the following recommendations are suggested to improve the research methods of future research related to interventions implemented in the summer day camp settings.

1. Including a control group or assigning an implementation score

One recommendation would be to include a control group of summer day camps that are not participating in the Power Up intervention. Having a control group is important in understanding what changes or possible observed effects may be attributed to the intervention. In this case, it should be ensured that the criteria for selecting Power Up camps include strong implementation. In the work for this study, it was not feasible to recruit control camps for the evaluation due to funding and time constraints. Instead of a control camp, another possibility

might be to assign an implementation score based on the level of engagement in the Power Up intervention for camps participating in the evaluation. Additional analyses could be completed to compare the observation results of the high implementation camps with the low implementation camps.

2. Drawing comparisons with S-Squad camps

Another possibility for future research might be to conduct a study that includes a comparison with a sample of summer day camps that participate in the S-squad initiative. As previously mentioned, it is a relatively new concept but is a promising addition to Power Up camps to promote uptake of the program content and encourage staff to use its tools. This initiative is typically offered to camps that newly sign-on for the Power Up intervention and camps with very little to no experience with the program. Thus, it would be beneficial in future research to compare S-squad camps to a sample of camps without S-squad at the same level of implementation, as well as camps with a higher implementation score to determine its potential effects on improving program implementation and the overall camp experience.

3. Examination of weather and temperature on PA

Another possibility for future research is to examine how weather and/or climate affects the PA levels observed by campers. A benefit of direct observation tools such as SOPLAY is the ability to observe the camp environment and its contexts. This includes information about the weather (i.e. presence of rain) and climate (i.e. temperature readings indoors and outdoors). For example, in a study using SOPLAY observations to measure the interactions between shade, nature and children's PA levels (Poulos & Wilson et. al, 2022), researchers found that the presence of shade was positively correlated with sedentary behaviours and light PA. During hot, summer days, higher levels of solar radiation and an increase in air temperature push children to seek shade for rest and cooling during times of play. However, it was also found that the presence of shaded areas did not hinder PA engagement as children were observed to be engaged in light PA in shaded areas large enough for smaller activities to occur (Poulos & Wilson et. al, 2022).

Although some environmental information was collected during the data collection of this study, it was not one of the main research goals as there were not enough data points to

compare the effects of rain and temperature on the PA levels for campers. However, this could be an area for future research and a way of building on the use of SOPLAY in the summer camp setting to inform on important topics such as the effects of climate change or heat on PA.

4. Increase the number and/or size of camps for evaluation

Another research recommendation is to increase the number of camps for the evaluation and/or the size of camps so that more campers might be examined. The Covid-19 pandemic and the established restrictions was a barrier to camp recruitment. Most camps were not operating during the lockdown periods and attendance at camps was lower than before the pandemic. More direct observations and a higher number of campers would strengthen the results of this research.

5.3.2 Recommendations for the Power Up training

These recommendations are related to elements of Power Up training that need to be improved.

1. Emphasis during training on how to access program resources and tools

The first recommendation is the need for the training of camp staff to emphasize the use of the program content and materials in the camp setting to further the promotion of healthy habits. Specifically, this includes showing camp staff how to access the tools and resources offered by TS and Power Up during training, so that they are more familiar with how to access them during camp. A higher level of familiarity with where to access the tools will encourage its usage and assist staff with activity programming in the camp setting.

2. More training opportunities targeted towards higher level camp staff

The second training recommendation would be to include more training opportunities targeted towards the administrators and coordinators. Participant H574 stated:

“I've already told them at TS [La Fondation Tremplin Santé], that if their job is to try and convince us administrators to embark on the process, if we're convinced, we'll be able to pass that on to the counsellors who themselves will pass that onto the children.

The coordinator, they may not have the time, even the administrator of the camp may not have the time or may not be as involved in the project.”

This quote highlights the likelihood that administrators and coordinators will encourage/demand counsellors to implement the Power Up program if they buy-in to its strategy and tactics.

Currently, the training for administrators and coordinators is the yearly summit. If the administrative camp staff are not motivated or sold on the program and its content during this training, it will influence the sharing of the Power Up resources in the camp setting. Thus, it is beneficial for administrators and coordinators to be offered training about how to provide the Power Up resources and materials to counsellors to better equip them during the summer day camps.

3. More in-person training opportunities

Lastly, the third training recommendation is to include more options for in-person training sessions instead of strictly virtual training. In-person training is only offered near the organization headquarters in Quebec City, however setting up smaller groups to complete training in various regions in the province and other provinces will be helpful to improve program uptake and can incorporate participatory training exercises which cannot currently be done online.

5.3.3 Recommendations for Implementing the Power Up Program

Based on the results of this study overall and specific comments from the interviews, the following recommendations are suggested to support further program implementation in the summer day camp setting.

1. Expand the availability of S-Squad or alternatively, provide mentorship program and create an online forum

One recommendation is to expand the availability of the S-squad initiative and incorporate more of these Power Up ambassadors visiting participating summer day camps. The S-squad pilot project, which only started its testing phase in the summer of 2022, was only offered to certain regions within Quebec. From the interviews, one administrator participating in

the pilot project was very positive about the S-squad opportunity and thought it was helpful in understanding Power Up and its tools. During the interview, it was mentioned that the S-squad spent an entire day with on-site staff, engaging in productive discussions with them, leading Power Up activities and encouraging PA participation for both counsellors and campers. Their camp also received additional Power Up related materials prior to the arrival of the S-squad, that were reusable for camp activities following their visit. The presence of S-squad in the camp benefited the overall camp experience for both staff and campers. When asking a camp administrator that did not receive the S-squad about the initiative, Participant H574 stated:

Interviewer: *“Did you have the S-Squad initiative in your camp this year?”*

Participant H574: “No, what is the S-squad exactly?”

Interviewer: *“It’s like a team of specialists who go from camp to camp to reinforce training and promote Power Up activities”*

Participant H574: “Oh no, I don’t have that unfortunately, but I’d like that... If it was possible, I would have asked for it, for sure.”

This quote reinforces the idea that camps would be very open to the opportunity and incorporation of S-squad or Power Up ambassadors assisting with programming and training within participating camps. There are, however, issues with the scalability of S-squad, as it may not be feasible to offer this experience to the same degree to the hundreds of camps participating in the Power Up intervention every year.

There are many alternatives that could be recommended for other camps unable to receive the S-squad. One alternative could be to implement a mentorship program between camps. In this case, a veteran Power Up camp with a good relationship with TS that has implemented the intervention in their camp over multiple years might be connected with a new camp to assist them with implementing Power Up as a mentor. This could be done by connecting the administrators, coordinators and/or counsellors of two camps, where one camp provides guidance and supports to another, emphasizing the Power Up tools. This would allow staff to

share and learn about best practices for promoting healthy habits from their mentor camp. Another alternative to S-squad would be to create an online webpage, blog or forum open for all camp staff from participating Power Up camps to access. Camp staff are already provided information to log into the Power Up website to access its resources during camp. Creating a link on their website to a forum where they could ask or answer questions and connect with others and make suggestions for improvements would benefit the program and its users. This might enable engaged camps to promote resources that are particularly useful to them in a camp setting. Power Up might consider paying camp staff to “seed” content about the use of tools in this Forum to encourage other camps.

2. Update the English resources available

TS has strong resources available in French. English-speaking camps reported that they struggled to access the program resources and materials as many of the training modules and video are only in French. Updating the materials to be available in English would help with the program’s outreach goals to the provinces of Canada outside of Quebec.

3. Provide ‘low-cost’ HE content alternatives

It is recommended that Power Up include ‘low-cost’ alternatives for HE content as many camps have a limited budget to perform camp activities that involve the use of perishable food. HE content in the Power Up Program includes activities related to preparing food, eating fruits and vegetables and gardening which often involve additional resources such as cost (purchasing perishable foods), set-up time (gardening and cooking) and an allotted sanitary space. Activities performed during summer day camps related to HE content vary depending on the individual camps and the availability of time and resources at their disposal. TS offers funding and expertise to the few camps that want to create and maintain a garden. However, for the majority of other camps, implementing Power Up’s HE content typically involves activities where children sample foods (i.e. blind taste testing games), recreate recipes provided on the Power Up website and through discussions about food (i.e. food groups and nutrition content). In camps with a limited budget and from underserved populations, it may be difficult to implement Power Up activities that encourage campers to create, sample and taste food that is not readily available in the camp. Thus, there should be cost-effective alternative ideas or recipes to offer to camps

that incorporate foods that are non-perishable or have a longer shelf life (i.e. frozen fruits or vegetables). Currently, TS offers upwards of 140 different healthy recipes accessible on their website. These recipes are submitted or created by a team of dieticians and nutritionists working with TS. They have filters for their list of recipes that include options such as cooking time (ranging from less than 20 minutes to over 40 minutes), type of meal (i.e. energy balls, drinks, and muffins) and excluding allergens (i.e. without eggs, milk and nuts). A majority of these recipes require the use of perishable food ingredients such as fresh fruits and vegetables. Creating an additional option for low-cost recipes on their website or a filter to separate recipes based on their average costs to produce would benefit camps with a limited budget.

4. Increase social media presence and online engagement

It is recommended that TS and Power Up enhance their social media presence. Currently, TS' Youtube channel has 50 videos spanning three years with no clear direction, regular upload schedule or theme. They are uploaded in bulk and jump from one topic to another. In one instance TS has uploaded videos that promote the Power Up program and then switches to cooking recipes and back to key message about the program. As well, of those available videos, there are a limited number of views which could imply the videos are not well promoted. Social media including but not limited to Youtube could be used to introduce and promote weekly content including challenges, new activities and tools or even inform on news relevant to the Power Up program. This may resonate more with younger camp staff that use Youtube on a daily basis and can be accessed at any time during camp on personal cellular devices.

5. Incorporate more mental-health related content into activities

It is recommended that TS incorporate more mental-health related content such as stress-management and well-being content for counsellors. In a publication outlining guidelines for building up good mental health (Lehtinen, 2008), it is stated that the period most favourable for effective mental health promoting activities is during childhood. Outside of a given home, school and after-school settings are vital for promoting mental health activities (Lehtinen, 2008). This includes activities that are catered for younger ages such as yoga, meditation, providing sensory toys (i.e. slime, stress balls, sand and playdough) and dancing. Additionally, encouraging physical activities to take place in outdoor play areas instead of indoor settings such as

gymnasiums will contribute to mental health and well-being benefits for the campers. In a systematic review of the impact of green space exposure and children's and adolescents' mental health (Vanaken & Danckaerts, 2018), there was evidence to suggest a beneficial association between exposure to green spaces and children's mental well-being.

6. More free-play and water-related opportunities during camp

It is also recommended that TS incorporate more physical activities that involve free-play and water (i.e. swimming, outdoor splashpads and playgrounds, sponge-races, water balloon fights and sprinklers). The results from the supplementary analysis on the PA levels of campers by activity type indicated that the campers were more engaged in MVPA during free-play and water-related activities. Reporting the benefits of these activities in getting campers moving would support counsellor daily camp programming during the summer.

5.4 Strengths and Limitations

The overall mixed methods approach from multiple data sources provides a way of understanding the implementation of the program from staff perspectives through the interviews, and in understanding how the counsellors utilize the Power Up resources through observing the camp environment. These two methods and sources of information are used to triangulate the understanding of the implementation of Power Up in the camp setting. The cross-sectional design of the observations conducted on an annual basis is fast, inexpensive and easy to conduct. This design is suitable for providing information about the camp PA and HE environments during the summer. The use of the SOPLAY and SOSPLAN time-sampling tools are strengths due to their validity in similar study settings with correlations to direct observational methods. Moreover, the ability of the tools to overcome the barriers of using objective measures such as accelerometers within the study population (e.g. accelerometers are not attached to participant properly, get lost and are inaccurate during water-related activities). SOPLAY and SOSPLAN are also adaptable as they are sensitive to camp environments that change activities quickly. Another strength of this study is the ability for the tools to capture different variables related to PA and HE. This includes staff promotion behaviours and management, camper PA levels and the environment context. In a systematic review of 60 US and Canadian studies implementing SOPLAY, researchers found that a strength of the tool was its ability to capture contextual

information related to play and leisure settings (i.e. accessible, usable, supervised, organized, equipped and other environmental factors), which is not possible with other measurements such as accelerometers and heart-rate monitors (Kinder & Nam et. al, 2023). Lastly, direct observations through SOPLAY and SOSPAN are useful for observing young children as the instruments do not require a direct response from the participants and they can classify free play versus structured activities offered at camps (De Saint-Maurice & Pedro, 2009).

A limitation of this study is that there is no control group not working with Power Up. It was not possible to recruit similar camps not part of the Power Up program because of a lack of available resources and time. To overcome this barrier, a sensitivity analysis is recommended by level of camp engagement to understand whether those camps that implemented Power Up to a greater extent resulted in higher levels of reported PA for campers and a more positive environment.

Another weakness to this research study is that the momentary time-sampling methods used for capturing observed behaviours for campers and counsellors are conducted at a single point in time and not over the course of the day (De Saint-Maurice & Pedro, 2009). When conducting a scan of a zone during the camp visits, the researchers are only observing the campers and camp staff for a brief moment of 1-2 minutes before proceeding to another active zone within the camp. If for example, the group of campers are playing dodgeball but are in the process of setting up or taking a break between games, the researchers arriving will conduct the scan and report no movement or less activity. This may not accurately reflect the behaviours and activity levels of the participants involved in the next period of time. Lastly, regarding the interview process, there were a limited number of interviews with camp counsellors and on-site camp staff. Most of the interviews were conducted with camp administrators and coordinators, with only one counsellor participating in an interview. Most of the counsellors were in high school or had just begun attending post-secondary education after the camp ended. For many, summer day camps were a summer job and participating in an interview following the end of camps was likely not a priority. Additionally, interviews were conducted with camp staff up to 7 months following their camp experience. Recall bias may have contributed to inaccuracies in reported information regarding their use of the tools and experience with the intervention and other camp staff.

6. Conclusion

This study is unique in its mixed methods approach, using a combination of semi-structured interviews and direct observational data. The findings of this work will provide context to the broader evaluation project related to why campers may or may not change their behaviours after their camp experience. The interviews conducted with the different levels of camp staff (administrators, coordinators and counsellors) provided insight into the implementation of the program and personal experiences with the intervention from a first-hand perspective. The validated, time-sampling tools SOPLAY and SOSPAN were useful instruments in providing context into the camp environment and in reporting valid and reliable data on the PA in campers and the leadership provided by counsellors. The results indicated that the training and resources provided by Power Up supported camp staff in creating environments that were conducive to the promotion of healthy habits for children and youth. Camp staff referenced Power Up materials as a support with daily activity programming and learned to diversify activities for the inclusion of all campers to promote active PA participation. TS also provided funding opportunities and reinforced a positive relationship through communication with individual camps to support their needs. The results also revealed areas for improving training to better support camp staff in implementing Power Up plans. New programs to continue to engage Power Up camps throughout the summer may also enhance use of the tools.

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Appendices

Appendix A.

Power Up Program Overview Infographics

Fondation Tremplin Santé supports **youth organizations** with its **Power Up program** so that **healthy habits can thrive**

Free program



Healthy Eating



Physical Activity



Well-being

Contact Us

info@gopowerup.ca
1-833 648-1444

Follow Us



tremplinsante.ca/en

180 Games, Activities and Tools
available to your entire team through an online portal.



Personalized Support

offered by a dietician and a kinesiologist to easily set up projects on healthy habits.



4 Exciting Challenges

To spice up youth's and counselor's summer.



5 Contests

Healthy habits always win!



Funding

so that more organizations can present or improve projects on healthy habits.



Interactive Training

for managers, coordinators and counselors.



More than 150 recipes

to cook onsite or with family.



67 videos

To discover healthy habits activities with youth.



Thank you to our partners :  Public Health Agency of Canada 

Secrétariat à la jeunesse Québec 

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An array of
tools
 to discover on
portail.tremplinsante.ca/en



90 simple games

That allow campers to easily and quickly integrate healthy lifestyle habits everyday



30 activities

for diving deeper into healthy lifestyle habits this summer and having an impact on your campers



20 communication tools

including posters, letters to parents, visual content for social media platforms, and much more

15 planning tools

To simply integrate healthy eating, physical activity and well-being in summer programming



Training for the animation team

Innovative – 100% turnkey – easy-to-offer trainings



Tchin-tchin Challenge at my camp

A week to raise awareness of proper hydration among counselors and campers through fun-filled activities that highlight the benefits of water consumption



Health Challenge at my camp

A week of exciting challenges related to healthy eating, physical activity and relaxation for counselors and campers

40 videos

featuring activities, trainings, promotions and recipes



PAUSE

PAUSE Challenges

A week where the entire camp is challenged to log off and cut down on screen time!



Appendix B.

Administrator, Coordinator and Camp Staff Qualitative Interview Recruitment E-mail



UNIVERSITY OF
WATERLOO

FACULTY OF HEALTH
**School of Public
Health Sciences**

[Date, 2022]

Dear Participant:

We are looking for camp staff, coordinators and program administrators to participate in interviews to understand how Tremplin Santé is implemented in the camp setting

Should you choose to participate in this study, you will be asked to share your camp and program experiences in an interview that will take up to 60 minutes. The questions will be open-ended and will focus on your personal experiences with the Tremplin Santé intervention and its implementation. Further information about this research study and its process is included in the Letter of Intent attached to this e-mail.

Should you choose to participate in this research study, you will be receiving a \$30 VISA gift card as a token of our appreciation for your time and effort.

If you would like to participate in this study, please review and sign the attached consent form and forward it to the following contacts:

Melvin Chih-Shing Chen

Email: mc3chen@uwaterloo.ca

or

Dr. Jennifer Yessis

School of Public Health Sciences

(519) 888-4567 Ext. 42860 or

Email: jyessis@uwaterloo.ca

**This study has been reviewed by, and received ethics clearance
through a University of Waterloo Research Ethics Committee**

Appendix C.

Administrator, Coordinator and Camp Staff Qualitative Interview Letter of Intent



UNIVERSITY OF
WATERLOO

FACULTY OF HEALTH
**School of Public
Health Sciences**

Letter of Intent

[Date, 2022]

Dear Participant:

This letter is an invitation to participate an evaluation of the Tremplin Santé program used in participating summer camps. The purpose of this evaluation is to understand how the Tremplin Santé program is implemented at camp from the experience of administrators, coordinators and counsellors.

This study will be undertaken by the School of Public Health Sciences graduate student Melvin Chen, under the supervision of Dr. Jennifer Yessis from the University of Waterloo, in partnership with Laval University. A student-researcher will ask you questions related to your experiences with Tremplin Santé.

Participation in this study is voluntary. It will involve taking part in an open-ended interview that will take up to minutes to complete. The interview will take place by phone, or using an application such as Cisco WebEx, Microsoft Teams or Skype. When information is transmitted over the internet, privacy cannot be guaranteed. There is always a risk your responses may be intercepted by a third party. University of Waterloo researchers will not collect internet protocol (IP) addresses or other information which could link your participation to your computer or electronic device without first informing you.

With your permission, the interview will be audio-recorded to facilitate the collection of information, to be transcribed for analysis. During the interview, you may decline to answer any of the interview questions and/or share your personal information with the student-researcher. Further, you may withdraw from this study at any time by advising the researcher. If you decide to withdraw, we will erase the interview transcript and all the research notes that were taken during the interview process. Your identity will remain confidential. Your name or any other personal identifying information will not appear in any research papers or publications resulting from this study. However, with your permission, we will share the anonymized interview transcript with our partnered research team at Laval University. To protect your confidentiality, the transcription will be assigned under a pseudonym. The online consent form that you signed will be stored in a password-protected folder on the University of Waterloo cloud server. Your anonymized interviews transcript will be stored on password-protected student researcher's University of Waterloo cloud storage drive for a minimum of seven years.

Participation in this study may not provide any personal benefit to you. We hope the data collected will advance our understanding of the implementation of Tremplin Santé's program and identify areas that might enhance its impact going forward. There are no known or anticipated risks to you as a participant in this study.

In recognition of your time and effort in participating in this research study, you will receive a \$30 VISA gift card, which will be distributed to all participants after all of the interviews in this study have taken place.

This study has been reviewed and received ethics clearance through a University of Waterloo Research Ethics Committee (ORE#40438) If you have questions for the Committee, contact Office of Research Ethics at 1-519-888-4567 ext. 36005 or ore-ceo@uwaterloo.ca.

For all other questions regarding this study, or if you would like additional information to assist you in reaching a decision about participation, please contact Melvin Chih-Shing Chen, at (647) 504-3953 or e-mail mc3chen@uwaterloo.ca or Dr. Jennifer Yessis, at (519) 888-4567 ext. 42860 or email jyessis@uwaterloo.ca

I very much look forward to speaking with you and thank you in advance for your assistance in this project.

Yours Sincerely,

-Melvin Chih-Shing Chen

Appendix D.

Administrator, Coordinator and Camp Staff Qualitative Consent Form



UNIVERSITY OF
WATERLOO

FACULTY OF HEALTH
**School of Public
Health Sciences**

CONSENT FORM

[Date, 2022]

Dear Participant:

By signing this consent form, you are not waiving your legal rights or releasing the investigator(s) or involved institution(s) from their legal and professional responsibilities.

I have read the information presented in the information letter about the study being conducted by Melvin Chih-Shing Chen and Dr. Jennifer Yessis, School of Public Health Sciences, University of Waterloo. I have had the opportunity to ask any questions related to this study, to receive satisfactory answers to my questions, and any additional details I wanted.

I am aware that I am allowing my interview to be audio recorded to ensure an accurate recording of my responses.

I am also aware that excerpts from the interview may be included in the project paper and/or publications to come from this research, with the understanding that the quotations will be anonymous.

I was informed that I may withdraw my consent at any time by advising the student researcher.

This study has been reviewed and received ethics clearance through a University of Waterloo Research Ethics Committee (ORE#40438). If you have questions for the Committee contact the Office of Research Ethics, at 1-519-888-4567 ext. 36005 or ore-ceo@uwaterloo.ca.

For all other questions contact Jennifer Yessis at (519) 888-4567 ext. 42860 or jyessis@uwaterloo.ca

With full knowledge of all foregoing, I agree, of my own free will, to participate in this study.

YES NO

I agree to have my interview audio recorded.

YES NO

I agree to the use of anonymous quotations in the course project papers and any other publications based on this research.

YES NO

Participant Name: _____ (Please print)

Participant Signature: _____

Witness Name: _____ (Please print)

Witness Signature: _____

Date: _____

Appendix E.

Coordinator, Administrator and Counsellor Qualitative Interview Guide

Interview Guide – Purpose and Plans

Plan

To conduct one-on-one interviews with camp staff & administrators to determine the degree of implementation of Tremplin Santé in the camp setting.

Purpose

Data collection for the evaluation of Tremplin Santé has been quantitative to date, gathered primarily using questionnaires for the counsellors and campers as well as observations of the camp environment using standardized tools, SOSPAN and SOPLAY. Thus, collecting qualitative data through interviews with staff & administrators who are present at the camp day-to-day may prove very informative. Interviews have the ability to provide a first-hand, in-depth understanding of the opinions, thoughts and feelings administrators have towards the program and its usefulness in the camp setting. The information obtained from these interviews will be valuable in improving the program at a more practical level in the camp setting.

Interview Guide for Coordinators

Introduction

Hello, I am [name], from the University of Waterloo. Thank you again for agreeing to participate in this research study and interview. I anticipate that this interview will take up to 60 minutes. As a reminder, this study is being conducted to learn more about how Tremplin Santé was implemented at your camp. The intent of this study is to understand how the Tremplin Santé intervention was promoted and implemented in the camp setting. I will be asking questions such as how counsellors learned about Tremplin Santé and what counsellors did to use the resources and tools at your disposal. Is now still a good time to speak with me?

Yes = Great. Well, why don't we get started?

No = Okay, That's fine. When might be a better time for you to talk with me?

Consent Review

Before we begin the interview, I wanted to get your permission for things that were outlined in your information and consent letter. Specifically, I would like to record this interview to ensure I can effectively analyze all the information that you provide as this will help us to communicate the work that you have done in an accurate way. Please note that my colleague [name] will be listening to this interview to take notes in case anything happens to the recording. He will keep his camera off and observe with his microphone muted. He may ask a question at the end if there is anything I miss. The individuals on the research team are the only one who will have access to the recordings and transcriptions. No one from Tremplin Santé will see the recordings. Do I have your permission to audio-record this interview? We would also like to use quotes from the interview in the final report, in presentations, and publications resulting from this study. Do I have your permission to use unattributed quotes in the final report?

Please know that you may decline to answer any questions, and if you wish to stop the interview or your participation in the project at any time, please let me know.

Do you have any questions before we begin the interview? [answer any questions they may have].

1. To begin, please describe your role at your respective camp in Levis/Gatineau in the most recent Summer of 2021?
 - a. What inspired you to become involved in this work?
2. Why do you think your camp decided to participate in Tremplin Santé? What is the benefit to your camp in participating in Tremplin Santé?
 - a. What are some of the challenges?
3. How did you learn more about Tremplin Santé?
 - a. Probes:
 - i. Did you attend any specific training sessions offered by Le Fondation Tremplin Santé?
 - ii. What do you remember about the session(s)?
 - iii. Do you recall learning anything that you might be able to apply to the camp setting or to encourage other counsellors to incorporate into the day-to-day activities?
4. How did you support Tremplin Santé in your camp?
 - a. Did counsellors turn to you if they had questions regarding Tremplin Santé
 - b. If you had questions about Tremplin Santé, who did you talk to?
5. How did counsellors learn about Tremplin Santé before they started working at their camps?
 - a. Did they receive any written material to support their training?
 - b. Did counsellors do any activities or use the tools before they started?
6. How were the use of the tools and resources provided by Le Fondation Tremplin Santé encouraged within your camp?
 - a. Where were the resources available?
 - b. How were the resources promoted to all counsellors in the camp? How were the resources available to counsellors in the camp?
 - c. Do you believe that the counsellors used the tools that were provided?
7. What are other ways in which Tremplin Santé was implemented at your camp?
 - a. In the activities that encourage physical activity?
 - b. In the scheduling of activities at the camp?
 - c. In the use of equipment provided to children at the camp?
 - d. In a group setting or group gatherings throughout the day?
8. What resources would have helped your camp do more of what Tremplin Santé was encouraging?
9. How do counsellors utilize the intervention materials in summer day camp setting?
10. What worked well in your role as coordinator of the Tremplin Santé intervention?
11. Were there any challenges that you faced in your role with Tremplin Santé?
12. Do you have any recommendations to make Tremplin Santé more successful in the future?

Interview Guide for Administrators

Introduction

Hello, I am [name], from the University of Waterloo. Thank you again for agreeing to participate in this research study and interview. I anticipate that this interview will take anywhere between 30-45 minutes. As a reminder, this study is being conducted to learn more about why you decided to participate in the Tremplin Santé initiative, how it possibly supported you in the camp setting and how it was implemented. Is now still a good time to speak with me?

Yes = Great. Well, why don't we get started?

No = Okay, That's fine. When might be a better time for you to talk with me?

Consent Review

Before we begin the interview, I wanted to get your permission for things that were outlined in your information and consent letter. Specifically, I would like to record this interview to ensure I can effectively analyze all the information that you provide as this will help us to communicate the work that you have done in an accurate way. Please note that my colleague [name] will be listening to this interview to take notes in case anything happens to the recording. He will keep his camera off and observe with his microphone muted. He may ask a question at the end if there is anything I miss. The individuals on the research team are the only one who will have access to the recordings and transcriptions. No one from Tremplin Santé will see the recordings. Do I have your permission to audio-record this interview? We would also like to use quotes from the interview in the final report, in presentations, and publications resulting from this study. Do I have your permission to use unattributed quotes in the final report?

Please know that you may decline to answer any questions, and if you wish to stop the interview or your participation in the project at any time, please let me know.

Do you have any questions before we begin the interview? [answer any questions they may have].

1. To begin, please describe your role at the camps?
 - a. What inspired you to become involved in this work?
 - b. How did you support Tremplin Santé in your camp?
 - c. Where did you first learn about Tremplin Santé and why did your camp decide to participate in Tremplin Santé?
 - d. Describe the benefits of participating in the Le Fondation Tremplin Santé's intervention initiative?
2. How does Tremplin Santé align with the work that your camp does?
3. What did you hope to gain from implementing Tremplin Santé at your camps?
4. What was the role of the coordinators in terms of implementation of Tremplin Santé?
5. What was your role as an administrator in supporting Tremplin Santé?
 - a. Were you directly involved in the training provided by Tremplin Santé? Did you train the coordinators how to access and use the program?
 - b. Did you actively support the intervention at the camp(s)?
6. Did Tremplin Santé influence the allocation of resources that were made available at the camps following training?

7. Were there any tools or literature provided by Tremplin Santé for the coordinators to use during the camp?
8. How did you encourage training of coordinators and/or counsellors by Tremplin Santé prior to the camps taking place in the summer?
9. Was there any support to coordinators or counsellors when they began to work at the camp?
 - a. For example – to support them in their use of the tools and resources from Tremplin Santé
10. What was the best part of being involved as a camp within the Tremplin Santé initiative?
11. What would you recommend being improved to support camps in implementing Tremplin Santé?
 - a. Do you have any suggestions for improving Tremplin Santé's support?

Interview Guide for Counsellors

Introduction

Hello, I am [name], from the University of Waterloo. Thank you again for agreeing to participate in this research study and interview. I anticipate that this interview will take anywhere between 30-45 minutes. As a reminder, this study is being conducted to learn more about how Tremplin Santé was implemented at your camp.

The intent of this study is to understand how the Tremplin Santé intervention is being put into practice at the camp setting in the promotion of physical activity and healthy eating. I will be asking questions such as your perspective on Le Fondation Tremplin Santé's intervention, your thoughts on the training that you received and the usefulness of the tools and resources available to you in the camp setting. Is now still a good time to speak with me?

Yes = Great. Well, why don't we get started?

No = Okay, That's fine. When might be a better time for you to talk with me?

Consent Review

Before we begin the interview, I wanted to get your permission for things that were outlined in your information and consent letter. Specifically, I would like to record this interview to ensure I can effectively analyze all the information that you provide as this will help us to communicate the work that you have done in an accurate way. Please note that my colleague [name] will be listening to this interview to take notes in case anything happens to the recording. He will keep his camera off and observe with his microphone muted. He may ask a question at the end if there is anything I miss. The individuals on the research team are the only one who will have access to the recordings and transcriptions. No one from Tremplin Santé will see the recordings. Do I have your permission to audio-record this interview? We would also like to use quotes from the interview in the final report, in presentations, and publications resulting from this study. Do I have your permission to use unattributed quotes in the final report?

Please know that you may decline to answer any questions, and if you wish to stop the interview or your participation in the project at any time, please let me know.

Do you have any questions before we begin the interview? [answer any questions they may have].

1. To begin, please describe your role at your respective camp in Levis/Gatineau in the most recent Summer of 2021?
 - a. What inspired you to become involved in this work?
2. Describe your role in supporting Tremplin Santé's intervention. Do you believe your camp has benefitted from participating in Le Fondation Tremplin Santé's intervention?
 - a. What are some of the challenges?
3. How did you learn from Tremplin Santé?
 - a. Probes:
 - i. Did you attend any specific training sessions offered by Le Fondation Tremplin Santé?
 - ii. What do you remember about the session(s)?
 - iii. Do you recall learning anything that you might be able to apply to the camp setting and incorporate into the day-to-day activities?
4. How did you support Tremplin Santé in your camp?
 - a. Did you ask the on-site coordinator any questions regarding Tremplin Santé?
5. How did you learn about Tremplin Santé before working at the camp?
 - a. Did you receive any written material to support your training?
 - b. Did you participate in any practice activities or use the tools before you started?
6. Were you encouraged by the coordinators to use the tools and resources provided by Le Fondation Tremplin Santé within your camp?
 - a. Were the resources readily available and easy to access?
 - b. What form did they take (i.e. pamphlets, booklets, binders of reading and instructional material)
 - c. Were the resources promoted by the coordinators at all during the camp?
 - d. Did you and the other counsellors use the tools that were provided?
7. What are other ways in which Tremplin Santé was implemented and assisted you at the camp setting?
 - a. In the activities that encourage physical activity?
 - b. In the scheduling of activities at the camp?
 - c. In the use of equipment provided to children at the camp?
 - d. In a group setting or group gatherings throughout the day?
8. What further Tremplin Santé resources were you lacking that would have helped you during your day-to-day activities?
9. How did you utilize the intervention materials in summer day camp setting?
10. What worked well in your role as a counsellor, having learned and completed training sessions provided by Le Fondation Tremplin Santé?
11. Were there any challenges that you faced in your role as a counsellor?
12. Do you have any recommendations to make Tremplin Santé's intervention more successful in the future?

Appendix F.

Coordinator, Administrator and Counsellor Qualitative Interview Follow-up Letter



UNIVERSITY OF
WATERLOO

FACULTY OF HEALTH
**School of Public
Health Sciences**

[Date, 2021]

Dear Participant,

I would like to thank you for your participation in the evaluation of Tremplin Santé used in participating summer camps. As a reminder, the purpose of this study is to determine the program's ability to prepare camp staff to effectively promote healthy lifestyle behaviours including healthy eating habits and physical activity behaviours among youth attending the camps. As a thank you for your participation, you will receive a \$30 VISA card attached to this message.

The data collected during the interviews will contribute to our understanding of the role of camp staff in implementing Tremplin Santé, and how this might be improved in the future.

This study has been reviewed and received ethics clearance through a University of Waterloo Research Ethics Committee (ORE# 40438). If you have questions for the Committee, contact the Office of Research Ethics, at 1-519-888-4567 ext. 36005 or ore-ceo@uwaterloo.ca.

For all other questions, please contact Dr. Jennifer Yessis, at (519) 888-4567 ext.42860 or email jyessis@uwaterloo.ca

Please remember that your identity will be kept confidential. Once all the data are collected and analyzed for this evaluation, a report will be made and the results will be shared with the research team. If you wish to receive the results of this evaluation, please provide your email address and, when the study is completed, to Dr. Yessis and she will send you the information.

Thank you very much,

-Melvin Chih-Shing Chen (mc3chen@uwaterloo.ca)

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Appendix G.

Power Up Evaluation – Observation Operation Definitions

SOPLAY – Camper Observation

Conditions:

A = Area is accessible (e.g., not locked or rented to others).

U = Area is usable for physical activity (e.g., is not excessively wet or windy).

S = Area is supervised by designated camp or adjunct personnel (e.g., Counsellor, activity leader, volunteer). The supervisor must be in or adjacent to that specific area (i.e., available to direct students and respond to emergencies), but does not have to be instructing, officiating, or organizing activities.

O = Organized physical activity (i.e., scheduled, with leadership by school or agency personnel apparent) is occurring in the area (e.g., intramurals, interscholastic practices, fitness stations).

E = Equipment provided by the school or other agency is present (e.g., balls, jump ropes). Do not code 'YES' if the only equipment is permanent (e.g., basketball hoops) or is owned by students themselves.

Activity:

S = # of children sedentary

W = # of children walking

V = # of children very Active

Activity = Activity code (or name) for the most prominent physical in within designated area

SOSPAN - Staff Observation

Operational Definitions:

Physical Activity: Staff Behaviours	
Supervise	Staff member is present and monitoring children. This is the default code if staff member is engaged in or leading an activity other than a PA.
Other task	Staff member is present but is engaged in behaviors related to their duties as an ASP/SUMMER staff member (eg, setting up next activity, taking roll).
Off task	Staff member is present but is engaged in behaviors other than their duties related to the ASP/SUMMER or monitoring children (ie, texting/talking on phone, back turned to all children).
PA instruct/lead	Staff member is instructing children about physical activity or leading activity but not directly participating in activity.
PA engaged	Staff member is participating with children in physical activity.
PA promote	Staff member verbally promotes physical activity (eg, “keep going,” “awesome job,” “good effort”).
PA discourage	Staff member verbally discourages PA (eg, “stop running” “slow down”).
PA withhold	Staff member removes a child from physical activity (ie, present or future) or threatens to remove a child from physical activity (ie, present or future) as a consequence for behavior.

Physical Activity: Management	
Staff giving instructions	Staff are giving instructions (ie, other than PA instructions) to children.
Staff disciplining children	Children are being disciplined by staff.
Idle time	Children are not engaged in any specific activity and are awaiting instructions from staff.
Children stand and wait in line for turn	Children stand and wait their turn to play/participate in PA.
Elimination game	Game eliminates children from PA opportunities as it progresses.
Choice provided	Children have a choice of PAs in which to participate (ie, NOT do this or sit).
PA unsafe	Children are at risk for being injured (eg, children in danger of colliding, children in danger of being hit with ball/racket, in danger of running into wall).
Small sided game	Children are divided into several small games instead of one large game.
Rules modified for PA	Staff modified the rules of an active game in some way to maximize children's physical activity (eg, eliminated lines, added active part to non PA activity, stations).
Nutrition: Staff Behaviours	
Nutrition promote	Staff member verbally promotes healthy eating.
Nutrition education	Staff member is educating children about healthy snack options (eg, talking about nutrition content of snacks, using nutrition education curricula).
Staff eating	Staff member is eating, has food in their hand or in their vicinity in the presence of children. Type of food was then coded as fast food (eg, fast food containers, hot dogs, pizza) fruits and vegetables, chips and trail mixes, candy, snack bars.
Staff drinking	Staff member is drinking, has a cup in his/her hand or in the vicinity in the presence of children. Type of drink was then coded as fast food (eg, fast food cups), water, soda/colored drink, non-identifiable.
Nutrition: Management	
Safe food handling	Staff are observed practicing safe food handling techniques (eg, washing hands before serving food, disposing of unsanitary food, etc.).

Appendix H.

Power Up Evaluation – Activity Observation Worksheet

Camp Name:	Camp visit #:	1	2	3	Month:	Day:	Year:	Observer Name:	Reliability role:	Yes	No
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Before Camp/First Activity Before Lunch After Lunch / Near Break

Start Time:	:	Observation Area	# of staff:	Rain:	Yes	No	Temp	Indoor:	°C
								Outdoor:	°C

Staff Observation

PA Management				Staff PA Behaviors			
Staff giving other instructions	Yes	No		PA Instruct/lead	Yes	No	
Staff disciplining children	Yes	No		Staff engaged	Yes	No	
Idle time	Yes	No		Supervise	Yes	No	
Children stand in line for turn	Yes	No		Unrelated: Other task	Yes	No	
Elimination game	Yes	No		Unrelated: Off task	Yes	No	
Choice of PA provided	Yes	No		PA promote	Yes	No	
Choice of PA or Sedentary	Yes	No		PA discourage	Yes	No	
PA unsafe	Yes	No		Withholding PA	Yes	No	
Small sided game	Yes	No					
Rules modified for PA	Yes	No					

Camper Observation

Start Time	Area	Activity Type			Girls		Boys	
:	A - Accessible	Yes	No	Art	S - Sedentary	#:	#:	
	U - Usable	Yes	No	Water	W - Walking	#:	#:	
	S - Supervised	Yes	No	Physical Activity	V - Very active	#:	#:	
	O - Organized	Yes	No	Free Play	Activity:			
	E - Equipment	Yes	No	Gathering				
Observer Notes:								
Food environment								
Water fountain	Yes	(How many: _____)	No	Information poster	Yes	(How many: _____)	No	
Fridge	Yes	(How many: _____)	No	Vending Machine	Yes	(How many: _____)	No	
Microwave	Yes	(How many: _____)	No	Garden	Yes	(How many: _____)	No	

Appendix I.

Power Up Evaluation – Lunch Observation Worksheet

Start Time:	:	Area:	# of staff:	Rain:	Yes	Temp	Indoor: °C
	:				No		Outdoor: °C

Staff Observation

PA Management				Staff PA Behaviors			
Staff giving other instructions		Yes	No	PA Instruct/lead		Yes	No
Staff disciplining children		Yes	No	Staff engaged		Yes	No
Idle time		Yes	No	Supervise		Yes	No
Children stand in line for turn		Yes	No	Unrelated: Other task		Yes	No
Elimination game		Yes	No	Unrelated: Off task		Yes	No
Choice of PA provided		Yes	No	PA promote		Yes	No
Choice of PA or Sedentary		Yes	No	PA discourage		Yes	No
PA unsafe		Yes	No	Withholding PA		Yes	No
Small sided game		Yes	No				
Rules modified for PA		Yes	No				
Staff Nutrition Behaviours and Management							
Nutrition promote		Yes	No				
Nutrition education		Yes	No				
Staff eating NON fruit/veg		Yes	No				
Staff eating fruit/veg		Yes	No				
Staff drinking NON water		Yes	No				
Staff drinking water		Yes	No				
Safe food handling		Yes	No				

Observer Notes:

Appendix J. Interrater Agreement Tables

Table 12: Interrater Agreement Summary (2021 Evaluation Summer)

Variable Totals	Team 1 (David + Simon)	Team 2 (Melvin + Essoninam)
Staff Observations + Area Observations (Kappa)	0.948	0.925
Camper PA Observations + # of Staff (ICC)	0.977	0.967

Table 13: Interrater Agreement Summary (2022 Evaluation Summer)

Variable Totals	Team 1 (David + Florence)	Team 2 (Melvin + Nada)
Staff Observations + Area Observations (Kappa)	0.999	0.991
Camper PA Observations + # of Staff (ICC)	0.997	0.996

Table 14: Interrater Agreement Summary (2023 Evaluation Summer)

Variable Totals	Team 1 (David + Florence & Karina)	Team 2 (Melvin + Nada)	Team 3 (Eva + Simon & Anis)
Staff Observations + Area Observations (Kappa)	0.983	0.976	0.993
Camper PA Observations + # of Staff (ICC)	0.996	0.998	0.995

Interpretations

Interclass Correlation Coefficient (ICC)

- Looking at “Average Measures for the ICC” – how good is the inter-rater reliability
 - >0.7 is acceptable
 - >0.8 is good
 - >0.9 is excellent
- Lower bound of the 95% Confidence Interval gives an indication of what the worst is

Cohen’s Kappa

- Looking at “Symmetric Measures of Kappa”
 - $0.40 - 0.59$ is moderate agreement
 - $0.60 - 0.79$ is substantial agreement
 - $0.80 - 0.99$ is outstanding agreement