6-2-2023

Perceived Physical Competence, Self-Esteem, and Leadership among Young Girls: A Program Evaluation of the Girls Organizing and Learning Sport (GOALS) Program

Bailey Amy Csabai
University of Windsor

Perceived Physical Competence, Self-Esteem, and Leadership among Young Girls: A Program Evaluation of the Girls Organizing and Learning Sport (GOALS) Program

By

Bailey Csabai

A Thesis
Submitted to the Faculty of Graduate Studies
through the Department of Kinesiology
in Partial Fulfillment of the Requirements for
the Degree of Master of Human Kinetics
at the University of Windsor

Windsor, Ontario, Canada

2023

Perceived Physical Competence, Self-Esteem, and Leadership among Young Girls: A Program Evaluation of the Girls Organizing and Learning Sport (GOALS) Program

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Bailey Csabai

APPROVED BY:

_____

G. Salinitri
Faculty of Education

_____

M. Holman
Faculty of Human Kinetics

_____

S. J. Woodruff, Advisor
Faculty of Human Kinetics

April 18, 2023

Declaration of Originality

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Abstract

This study evaluated a leadership-based physical activity program, *Girls Organizing and Learning Sport* (GOALS) by assessing changes in physical activity, health behaviours, perceived physical competence, self-esteem, and leadership among the participants. Of the 224 participants who enrolled in the GOALS program, 79 (35.2%) completed a pre- and post-program survey containing questions concerning demographics, general physical activity, physical competence, self-esteem, and leadership. The GOALS program held 2-hour weekly sessions over 4-weeks (a total of 8 hours) at nine different locations across Windsor-Essex County. Paired-sample t-tests, chi-squares, and one-way ANOVA tests were utilized to analyze differences before and after the GOALS program. Results revealed that more participants were involved in school sports, community sports, and regular physical activity post-program (all p's < 0.05), however, the GOALS program did not elicit changes in health behaviours or total scores for physical competence, self-esteem, or leadership (all p's > 0.05). Yet, statistically significant results were observed between physical competence difference scores and those that take care of their health by exercising ($p = 0.025$), leadership difference scores and those that take of their health by exercising ($p = 0.044$), self-esteem difference scores by program location ($p = 0.001$), and physical competence difference scores by ethnicity ($p = 0.003$). Overall, further research into design, administration, and targeted outcomes is recommended for future implementation.

Dedication

To all the extraordinary women in my life, especially those involved in this project. And to my parents, thank you for providing me with every opportunity and continuously aspiring me to be my own type of extraordinary.

Acknowledgements

I would like to express my immense gratitude to all the individuals who helped make the completion of this thesis possible.

Dr. Sarah J. Woodruff – For being the best advisor I could have asked for. I am so grateful for your unwavering support, endless encouragement, and a continuous push to help me succeed. Thank you for keeping my passion for learning alive.

Dr. Marge Holman and Dr. Geri Salinitri – For being examples of strong, confident women many girls and women strive to be. I am so thankful for your insight, expertise, and aid in this project.

Ms. Lisa Voakes, Dr. Barb Pollard, and the Program Leaders – For all your invaluable help implementing the program. This project would not have been possible without you all. Thank you for your devotion to helping young girls.

Dr. Jan Matte-Gasparovic and Ms. Gail Matte-Leach – For being the founders of the original GOALS program. Thank you for not only acknowledging a disparity in girls but doing something to change it.

The Faculty of Human Kinetics – For making my experience as an MHK student an unforgettable one. Thank you to my fellow graduate students and laboratory mates who all impacted and inspired me in some way or another.

Mom, Dad, Riley, and Josh – For being my rocks. Words cannot describe the immense love I have for you all.

This project would not have been possible without funding from the *Social Sciences and Humanities Research Council* and the *Ontario Graduate Scholarship Program*.

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Introduction

Most children and adolescents worldwide do not accumulate the recommended amount of physical activity (PA; Aubert et al., 2018; World Health Organization (WHO), 2020). In Canada, recommendations on PA are outlined in the *Canadian 24-Hour Movement Guidelines for Children and Youth* (Canadian Society for Exercise Physiology (CSEP), 2019), which suggest that those aged 5 to 17 years accumulate at least 60 minutes of moderate to vigorous physical activity (MVPA) per day (CSEP, 2019). However, most children and adolescents in Canada do not meet these recommendations (Aubert et al., 2018; Hallal et al., 2012), and are, therefore, at risk of poor physical and psychosocial outcomes (Janssen & Leblanc, 2010; WHO, 2020). Insufficient PA during childhood and adolescence is associated with many negative outcomes, including increased risk of obesity (Buckinx et al., 2021), different types of cancer (Patel et al., 2019), elevated cardiometabolic risk factors (Biddle et al., 2019; Lavie et al., 2019; Silva et al., 2016), and lower academic achievement (Álvarez-Bueno et al., 2017; Trudeau & Shephard, 2008).

Compared to adolescents, children have slightly higher average daily PA levels (Statistics Canada, 2019), however, boys consistently accumulate significantly higher levels of daily PA compared to girls (Colley et al., 2017; Garriguet et al., 2016; Larouche et al., 2019; On the Move, 2013; Statistics Canada, 2019; Telford et al., 2016; Vella et al., 2014). A large-scale national study (Statistics Canada, 2019) reported that boys are two times as likely as girls to meet the MVPA daily recommendation. More specifically, it has been reported that girls have lower cardio-respiratory fitness, poorer eye-hand coordination, and less perceived competence in physical education (Telford et al., 2016).

In addition, girls are found to participate in fewer sports and extracurricular activities compared to boys (Telford et al., 2016). Furthermore, out of the girls who participate in an extracurricular sport, research has shown that about 1 in 3 will drop out by late adolescence, whereas the dropout rate for adolescent boys is only 1 in 10 (Canadian Women and Sport, 2020). These PA rates call for concern as research has shown that behavioural patterns formed in early childhood have implications throughout a life course (Blair et al., 2001; Jones et al., 2013). Learning PA-related skills during these early years is critical to lifelong healthy PA behaviours (Stafford, 2005; On the Move, 2013).

Besides the positive physical outcomes that are associated with PA participation (Eime et al., 2013; Turnnidge et al., 2014), PA has also been shown to foster key life skills needed to succeed in the future (Kay & Shipman, 2014). For example, PA has been shown to improve teamwork (Malm et al., 2019), goal setting (Paxton et al., 2012), time management (Macquet & Skalej, 2015), communication (Malm et al., 2019; Nopembri et al., 2017), problem-solving (Sozen, 2012), and leadership (Canadian Women and Sport, 2020; Ghildiyal, 2015) in a variety of individuals, but especially amongst young girls (Bean et al., 2015). The link between sport participation and leadership is well supported (Canadian Women and Sport, 2020; Ghildiyal, 2015). Increasing leadership in young girls can reinforce self-esteem and be a catalyst for successful adulthood (Karagianni & Jude Montgomery, 2018). Young leaders are more likely to take up managerial positions as adults, and leadership skills developed early on can have a positive impact on future wages (Kuhn & Weinberger, 2005). Unfortunately, despite the progress observed in the leadership opportunities for women and girls, women remain highly under-represented in

positional leadership roles (e.g., political, and managerial roles; Canadian Women's Foundation, 2022; Voelker, 2016), especially when compared to men (Voelker, 2016). A clear need exists to promote the leadership development of girls, which may in turn help narrow the gap in leadership positions during adulthood.

More locally, Windsor, Ontario, Canada was named the worst Canadian city for women when it comes to experiencing gender equality, good health, and well-being, according to an extensive national study carried out by the Centre for Policy Alternatives (2017). It was particularly noted that leadership role models and opportunities for developing leadership skills in Windsor are lacking (Centre for Policy Alternatives, 2017). In addition, the assessment noted that women in Windsor are among the least likely of all the Canadian cities surveyed to rate their health as good (Centre for Policy Alternatives, 2017). Therefore, it is evident that many girls and women residing in Windsor-Essex County would benefit from a local program that focuses on increasing leadership, confidence, and healthy behaviours (Kay & Shipman, 2014; Sandberg, 2015).

As such, the University of Windsor in Windsor-Essex County, Ontario has partnered with Leadership Advancement for Women and Sport (LAWS). LAWS is a local non-profit organization committed to enhancing gender equity in sport, recreation, and PA through awareness, education, and support in the creation of equitable opportunities for girls and women over their lifespans. For almost two decades, LAWS has been running an after-school PA program called *Girls Organizing and Learning Sport* (GOALS). This program is dedicated to girls (inclusive of transgender girls) 6-14 years of age to learn fundamental athletic skills through structured games that enhance their physical, social, emotional, and leadership skills. Recently, GOALS has struggled to

expand its reach and impact to more girl participants across a larger geographical area. Through this new partnership (the University of Windsor and LAWS), GOALS was recently redesigned to become systemic, consistent, structured, and sustainable. This was accomplished by using an updated manual, structured training for those delivering the program, and having clear objectives and outcomes. GOALS was then offered at nine locations across Windsor-Essex County in the Fall of 2022. As such, it was imperative to evaluate any changes among participants after participating in the GOALS program. Therefore, the purpose of this program evaluation was to assess the changes in physical activity and health behaviours, as well as overall perceived physical competence, self-esteem, and leadership among the participants. The findings will potentially provide evidence and support for the updated GOALS program and any information/feedback obtained will inform the process and procedures for future implementation.

Methods

Participants and Recruitment

Participants in this program evaluation were children who identified as being a girl (inclusive of transgender girls) registered in the GOALS program in Windsor-Essex County, Ontario. The age-based definition of "child", adopted by the *Convention on the Rights of the Child* (1989), is any person under the age of 18 years. The GOALS program was promoted to children aged 5-14 years of age. A total of nine locations (i.e., Public elementary schools) across Windsor-Essex County (i.e., Amherstburg, Kingsville, Leamington, and Windsor) held 2-hour weekly sessions over 4-weeks for a total of 8 hours (i.e., Friday nights from 6:00pm-8:00pm). The aim was to have approximately 25 participants enrolled at each location site.

Participant recruitment and obtaining parental consent to participate in the GOALS program were completed by the LAWS organization. Some of the recruitment techniques that LAWS used included posting flyers via social media websites (e.g., Facebook, Instagram, Twitter), posting advertisements on the LAWS website, word of mouth (i.e., from program leaders, past participants, and local community members), and having program leaders going into local grade schools to talk to prospective participants about the program.

While all procedures followed the *Tri-Council Policy Statement 2: Ethical Conduct for Research Involving Humans*, this program evaluation was deemed exempt due to the nature of the research. As such, a secondary use of data application was made to the University of Windsor Research Ethics Board to use the data for the purpose of this thesis.

Overall Study Design

Girls Organizing and Learning Sports (GOALS) Program

The GOALS program has struggled to expand its reach and impact across more than one or two sites each year. Moreover, there have been several barriers to its continuation and successful delivery. Two of the major barriers faced nearly every year have been finding appropriate leaders (e.g., have knowledge of the sport/activity, are good role models) and securing adequate, cost-effective spaces to successfully deliver the program. As such, Dr. Woodruff (Department of Kinesiology at the University of Windsor), Dr. Pollard (Faculty of Education at the University of Windsor) and Ms. Lisa Voakes (LAWS board member, teacher) received a Social Sciences and Humanity Research Council (SSHRC) grant to update the GOALS program to become systemic,

consistent, structured, and sustainable; with the long term goal of being able to share the GOALS program with other communities outside of Windsor-Essex County. The updated GOALS program was designed for participants to facilitate reciprocal support among all participants, encourage a substantial effort across activities, build relationships with others, maintain a positive focus, facilitate life skills development, provide opportunities to express one's voice, develop leadership skills, and develop confidence in one's ability to achieve goals.

The intention of the GOALS program is such that it doesn't matter what activity/sport is offered but should be tailored to the leaders' skills, interests, and comfort level (e.g., basketball, martial arts, yoga, swimming). Each session was divided into three distinct parts (beginning, middle, and conclusion), whereby each session had different types of activities within the distinct parts aimed at different program objectives. While the middle (main activity) was generally directed at the activity/sports instruction and participation, the beginning and conclusion activities were geared at specific outcomes. In particular, each week at the beginning of the program, the leaders facilitated a different type of activity aiming to build a sense of belonging or community (e.g., icebreaker activity) and each concluding activity aimed to highlight one or more of the outcome criteria or goals (e.g., self-esteem, self-confidence). One example of a concluding activity is a game where all girls stand in a circle and pass a balloon around, once a girl catches the balloon, she must read one of several statements written on the balloon out loud (e.g., "I am strong") and the rest of the group must repeat the phrase and then balloon gets passed to the next girl.

Moreover, at the first session, all participants set several goals including an individual skill goal (e.g., mastering a fundamental movement skill), an individual social goal (e.g., ability to communicate to themselves in times of fear/failure/risk-taking), an individual leadership goal (e.g., taking the lead to model proper form of a movement pattern), and a personal goal unrelated to sport/PA (e.g., speaking up for oneself). The group (all participants and leaders) also set a team social goal (e.g., always giving a thumbs up when a player comes off the court for substitution). These 5 outcome objectives were documented before and after the GOALS program via self-assessment sheets that were completed during the program.

GOALS Program Implementation (Fall 2022)

As part of this funded project (i.e., SSHRC), Dr. Pollard began teaching a full-year service-learning course entitled *Girls Organizing and Learning Sport*, directed at 2nd-year Faculty of Education students (teacher candidates) who are women at the University of Windsor (2022/2023 academic year). There were 33 students enrolled in the class, 32 identifying as women and one identifying as a man. The first half of the class provided instruction to students on how to deliver a successful GOALS program. The teacher candidates were then placed into groups of three or four students and chose a movement skill (e.g., yoga, dance, volleyball) that they were most comfortable delivering to a group of young girls. After developing a program that followed the course teachings and focused on interventions based on the weekly course resources, the groups of teacher candidates delivered their program to one of the nine location sites secured by LAWS. In working with the Greater Essex County District School Board, they provided the following elementary schools to deliver the GOALS program; John Campbell (Dance),

Anderdon (Zumba), Kingsville (Pilates/Yoga), Roseland (Move and Groove), Queen Victoria (Multi-Fitness), Forest Glade (Strength and Fitness), Ford City (Volleyball, Yoga, and Dance), David Maxwell (Camp), and Glenwood (Dance). Girls from all over Windsor-Essex County were able to partake in any program location of their choosing on Friday evenings (6-8 pm) for 4 weeks (Oct 7 – Nov 11, 2022) at no cost. Some small pieces of equipment (e.g., yoga mats, volleyballs) were purchased for the delivery of the GOALS program, as well as each site was provided with a $50 gift card to purchase consumables (e.g., poster paper, markers, name tags, stickers). All program leaders had to undergo safety screening (i.e., vulnerable sector clearance) as a requirement for being a Faculty of Education student. Each site also had an emergency action plan and first aid kit for safety precautions.

Program Evaluation

While evaluating the GOALS program is taking place at various time points throughout the grant and at multiple levels, the GOALS participants filled out a 5–10-minute pre- and post-program survey for the purpose of this research. The data from these surveys were used in the current thesis to examine physical activity, self-perceived physical competence, self-esteem, and leadership in the girls before and after participating in a physical activity and leadership-based program (i.e., GOALS). Both surveys (i.e., pre- and post-program) were paper-based and administered by the program leaders (i.e., teacher candidates). The surveys were completed by the participants independently. However, if a participant was unable to complete the survey due to their age, language barriers, or a lower reading comprehension level, the program leaders assisted with the explanation of a question or reading the survey out loud so that it could

be properly completed. The participants had the right to refuse to answer any of the questions and the right to stop the completion of the survey at any time.

Once the participants completed the paper-based surveys, the program leaders collected them and returned them to the Department of Kinesiology at the University of Windsor. All survey responses were manually inputted into a spreadsheet using Microsoft Excel (2018) by research assistants. All data were kept confidential and were anonymous to the researchers since the surveys asked for a self-made identification code rather than names. All data were stored on a password-protected University of Windsor computer on a password-protected OneDrive account.

Part A: Pre-Program Survey. A pre-program survey was utilized for this study. A 36-question paper-based survey was given out to each of the participants by the program leaders at the start of the first session. The survey included questions regarding basic demographics (i.e., age and grade), general physical activity and health behaviours, self-perceived physical competence, self-esteem, and leadership. See Appendix A for a copy of the pre-program survey. Participants were instructed that they did not have to answer any/all questions, and child assent was implied by the participants filling out the survey.

Part A: Post-Program Survey. After the girls participated in the 4-week GOALS program, they were asked to complete a post-program survey. The survey was administered in an identical manner to the pre-program with the addition of six questions. The following two questions were added to collect information on the participants' socioeconomic statuses: what school they go to and what race they identify as. As it was assumed that participants attend the school closest to their home, an estimated family-

level social economic status was calculated using the forward sortation code (first three digits of the school's postal code) and the median family income level according to the 2021 Canadian Census. Additionally, the following four open-ended questions were added specifically for program evaluation: whether or not they changed any physical activity behaviours as part of the GOALS program, whether or not they led any activities to help change the behaviours of others, whether or not they will try out for a sport or sign up for a physical activity program, and what their favourite part of the GOALS program was. Only the very last open-ended question (i.e., favourite part of the program) was used for this analysis. See Appendix B for the post-program survey.

Materials

The primary outcome measures were general physical activity, healthy behaviours, and the levels of perceived physical competence, self-esteem, and leadership in young girls.

General Physical Activity

Previous evaluations for the GOALS program (e.g., 2013/2014) asked participants three questions related to their physical activity pre- and post-program. The following questions were also used in the current program evaluation; "Do you currently participate in any school sports," "Do you currently participate in any community-based club sports," and "Do you currently participate in any regular physical activity that is not considered a sport, if not why?" Each item was scored based on whether participants selected "yes" or "no" for each question. Participants that selected "no" for whether they participate in any regular physical activity that is not considered a sport, were able to choose from six reasons why they do not; *cost, transportation, time, availability, I do not*

like physical activity and *other*. These questions were used when looking at changes in participants' physical activity pre- and post-program.

Perceived Physical Competence and Self-Esteem

The *Children's Perceived Competence Scale* (CPCS) is a questionnaire designed to measure children's self-perceived competence across the three domains of cognitive, social, and physical, with a fourth domain of general self-worth, based on Harter's *Perceived Competence Scale for Children* (PCSC; Harter, 1982). The CPCS is a valid and reliable measure of perceived competence for children between the ages of 6 and 15 years. This scale consists of 10 items in each of the four domains (i.e., cognitive, social, physical, and general self-worth). Each item is scored on a four-point scale: true (4), sort of true (3), sort of false (2), and false (1). For this program evaluation, the physical and general self-worth (self-esteem) domains were used. An example statement from the physical domain is "Are you interested in trying new sports?" and as part of the general self-worth domain, "Do you think you will become a great person?" is asked. Each domain will range from 10 to 40, with higher scores indicating greater perceived physical competence and self-esteem/worth. Past research indicates good reliability (e.g., Cronbach's alpha scores ranging from 0.75-0.87; Nagai et al., 2018). In the current study, Cronbach's alpha coefficient was 0.82 for physical competence and 0.77 for self-esteem.

Perceived Leadership

The Raising Healthy Eating and Active Living Kids in Alberta (REAL Kids Alberta) study was a large population-based survey conducted in 2008, 2010, and 2012. The survey collected data on health, nutrition, physical activity, lifestyle factors, and measured height and weight among grade five students (Real Kids Alberta, 2012). It

included a series of nine statements that provided a framework for measuring leadership skills in children (Ferland et al., 2015). These statements were developed based on the seven habits of the *Leader in Me* process (Covey, 2013a, b). The *Leader in Me* is an implementation process of an evidence-based, comprehensive model based on Steven R. Covey's *The Seven Habits of Highly Effective People*, which promotes the development of personal leadership and responsibility in students (Covey, 2013b). For this program evaluation, all nine leadership-based statements were used. The first six statements were used when assessing pre- and post-program changes in overall leadership scores. An example of one of the statements is "You do the right thing without being asked." The last three statements were used when looking at changes in the healthy behaviours pre- and post-program. These statements included asking participants if they take care of their health by eating healthy, exercising, and sleeping. The participants were asked to indicate the frequency of performing representative behaviours for each habit (i.e., statement), on an ordinal scale of 'never or rarely', 'sometimes', 'regularly', 'most of the time' and 'always or almost always', with an additional 'unsure' response. Given the scarcity of reliable instruments for assessing leadership skills (Maruska et al., 2010), this model is thought to be effective and reliable for evaluating leadership traits (Ferland et al., 2015). In the current study, Cronbach's alpha coefficient was 0.63.

Data Analysis

Approach to Data Analysis. For statistical purposes, SPSS version 28 for MAC (IBM Corp, 2021) was utilized to analyse the data. Descriptive, as well as reliability analyses, were performed on all variables included in this study. All objectives were analyzed using paired sample t-tests, chi square testing, and one-way analysis of variance

(ANOVA) tests to look at changes pre-program to post-program. Qualitatively, all words used to describe the participants' favourite part of the GOALS program were recorded and put into a word cloud generator.

Missing Data and Reliability Analyses. Prior to data analysis, data were cleaned and checked for missing values. Little's Missing Completely at Random (MCAR) test was used to make sure missing values occurred at random and then internal consistency (i.e., reliability) was checked using Cronbach's alpha.

Descriptive Analyses. Descriptive analyses were performed on all variables. Univariate normality and the presence of outliers were determined based on the descriptive statistics. Histograms (frequency distribution), stem-and-leaf plot, and boxplots were used to visually check for normality. In addition, Shapiro-Wilk tests, as well as standardized scores of skewness and kurtosis were conducted to assess normality.

Paired Sample T-Tests. Paired sample t-tests were used to analyze the difference mean scores for physical competence, self-esteem, and leadership, as well as the differences for healthy behaviours (i.e., if they take care of their health by eating healthy, exercising, and sleeping). The paired-samples t-test used the scores from the pre-program evaluation survey, completed before the first session of the GOALS program, and the post-program evaluation survey, completed on the last day of the GOALS program, to determine changes over time.

Assumptions of Paired-Samples T-Tests. There are four assumptions of paired-samples t-tests. First, a continuous dependent variable (e.g., physical competence, self-esteem, take care of their health by eating healthy) must be selected and, secondly, one independent variable that consists of two categorical**,** related groups, or matched pairs

(i.e., a dichotomous variable) must be selected. This was met as the GOALs program is the independent variable with two categorical pairs (i.e., pre- and post-program). The other two assumptions were tested using SPSS version 28 for MAC (IBM Corp, 2021). The first of these two assumptions requires that there should be no significant outliers in the differences between the two related groups. Boxplots were created and interpreted to determine whether any outliers should be removed. The other assumption is that the distribution of the differences in the dependent variable between the two related groups should be normally distributed. This assumption was tested using Normal Q-Q Plots and the Shapiro-Wilk test for normality for each difference score.

Chi-Square Test for Associations. Chi-square tests for associations were used to analyze whether there was an association between participant's physical activity pre- and post-program. Responses from the pre-program evaluation survey, completed before the first session of the GOALS program, and the post-program evaluation survey, completed on the last day of the GOALS program were used.

Assumptions of Chi-Square Test for Associations. There are three assumptions of the chi-square test for associations. The first assumption was having two variables that were measured at the categorical level (i.e., yes vs no, Likert scales). Second, was having independence of observations, meaning there were no relationship between the observations in the groups of the categorical variables or between the groups themselves. This was met by having different participants in each group. The last assumption was tested using SPSS version 28 for MAC (IBM Corp, 2021). The assumption related to how the data fit the model and was tested by creating crosstabulation tables to determine whether the expected cell frequencies were greater than five.

One-Way ANOVAs. One-way ANOVA tests were used to analyze the difference mean scores for participants' physical competence, self-esteem, and leadership by the categorical demographic variables (e.g., race/ethnicity, grade, physical activity, health behaviours).

***Assumptions of One-Way ANOVAs*.** There are six assumptions of one-way ANOVAs. First, a continuous dependent variable must be chosen, secondly, the independent variable must be categorical with two or more independent groups, and thirdly there must be independence of observations (i.e., there was no relationship between the participants in any of the groups). The other three assumptions relate to the nature of the data and were tested using SPSS version 28 for MAC (IBM Corp, 2021). The first of these three assumptions require no significant outliers in the groups of your independent variable in terms of the dependent variable. Again, boxplots were created and interpreted to determine whether any outliers should be removed. Next, the dependent variable needs to be normally distributed for each group of the independent variable. This was also tested using the Shapiro-Wilk test for normality**.** Lastly, the sixth assumption states homogeneity of variance is needed which was tested using Levene's test of equality of variances**.**

Results

Out of the 224 participants who signed up for the GOALS program, 163 participants chose to take part in the study. The remaining participants (n = 61) either refused to participate in the study or did not attend the first and/or last sessions of the GOALS program. Several other participants (n = 82) were further excluded because they did not complete both the pre- or post-program evaluation survey (i.e., only completed

one or the other). Lastly, two additional participants were excluded due to insufficient data responses (i.e., left 2+ pages/scales blank). Thus, the final sample included 79 participants that completed both pre- and post-program surveys and passed the validity checks with sufficient data.

Participant demographics can be found in Table 1. Most participants identified as being White (n = 46, 58.2%), had an estimated mean family income of $40,000 to $44,999 ($n$ = 35, 44.3%), were in grade 5 (n = 19, 24.1%), and did not attend the school that the program was being held at (n = 47, 59.5%). The average age of participants was 9.6 ± 2.0 years, ranging in age from 5 to 13 years.

General physical activity and health behaviours (pre- and post-program) are described in Table 2. At post-program, 12 more participants were involved in school sports ($\chi2(1) = 20.702$, $p = <.001$), 16 were more involved in community sport ($\chi2(1) = 4.893$, $p = .027$), and 9 were more involved in regular physical activity ($\chi2(1) = 18.562$, $p = <.001$). For those who reported that they do not currently participate in physical activity (not considered a sport) at post-program, they selected time (n = 10, 12.7%), availability (n = 9, 11.4%), disliking physical activity (n = 6, 7.6%), other (n = 4, 5.1%), cost (n = 3, 3.8%), and transportation (n = 1, 1.3%) as their most common barriers. Further investigation also indicated that there were also no significant differences between general health behaviours, healthy eating ($p > 0.05$), exercise ($p > 0.05$), and sleep ($p > 0.05$), pre- and post-program.

In addition, difference mean scores for each dependent variable (i.e., physical competence, self-esteem, leadership) are presented in Table 3. Overall, the GOALS program did not elicit a significant mean difference between pre- and post-program

scores for physical competence, $t(77) = -1.907$, $p = 0.06$, self-esteem, $t(76) = -0.267$, p = 0.79, or leadership, $t(77) = -1.893$, $p = 0.06$. Therefore, given the lack of statistical significance overall, further investigations were completed. Physical competence difference scores were statistically significant between those that take care of their health by exercising, $F(2,71) = 3.879$, $p = 0.025$. Post hoc analysis revealed that the mean difference for physical competence increased in those that reported they use exercise to stay healthy *sometimes/regularly* but decreased for those that reported *all the time/always*. Secondly, leadership difference scores were statistically significant between those that take of their health by exercising, $F(2,75) = 3.263$, $p = 0.044$. Post hoc analysis revealed that the mean difference for leadership increased among those that reported *sometimes/regularly* but decreased for that that reported *unsure/never/rarely*. Third, self-esteem difference scores were statistically significant between the different program locations, $F(8, 64) = 3.801$, $p = 0.001$. Post hoc analysis revealed that the self-esteem scores increased for Ford City and Forest Glade but decreased for David Maxwell and Queen Victoria. Fourth, physical competence difference scores were statistically significant between ethnicities, $F(2, 68) = 6.357$, $p = 0.003$. Post hoc analysis revealed that the mean difference for physical competence increased for Non-White individuals but decreased for White participants.

Finally, as part of the program evaluation, participants were asked what their favourite part of the GOALS program was. The most common response was making/playing with friends (see Figure 1).

Discussion

This program evaluation investigated whether a leadership-based PA program (GOALS) could elicit change in young girls. Previous research has shown that leadership-based PA programs have been successful in improving life skills and healthy behaviours among participants (Holt et al., 2017; Jones & Lavallee, 2009; Kendellen & Camiré, 2019; Voelker, 2016). Although no significant changes were observed across healthy behaviours before and after the GOALS program, there were more participants who became involved in school sports, community sports, and regular physical activity (as opposed to dropping out of) after the GOALS program. Furthermore, participants attributed time and availability as the top reasons why they do not participate in PA. This is in line with other research that states lack of time is one of the biggest barriers to PA for young girls (Al-Hazzaa, 2018; Martins et al., 2015; Duffey et al., 2021). This finding is concerning considering that many health behaviours track into adulthood, and in this case, adults also report lack of time as one of the most common barriers to PA (Baillot et al., 2021).

More specifically, this study investigated whether young girls' self-perceived physical competence, self-esteem, and leadership skills changed from pre- to post-program. Contrary to the current study's results, PA programs have been shown to improve perception of physical or sport competence (Barnett et al., 2008), increase an individual's confidence in their ability to engage in exercise (i.e., self-efficacy; Dishman, 2004; Liu et al., 2015), and build stronger leadership skills (Johnston & Papaioannou, 2013). However, no significant changes in participants' overall self-perceived physical competence, self-esteem, and leadership total scores in the current study were observed.

This discrepancy may have resulted from several different factors. One reason could be attributed to the program's adherence rates. Previous studies have shown that free afterschool PA programs typically acquire low or irregular attendance rates (Crimarco et al., 2018). When looking at the current study, attendance rates (i.e., number of sessions a participant attended vs. number of sessions they missed) were low. Research has shown that low program attendance reduces the benefits of participating in these types of programs (Crimarco et al., 2018). In addition, any benefits that were gained from participating in programs may be lost without regular attendance (Yin et al., 2012), which may explain the lack of statistical significance in the current results. Moreover, 2-hour sessions across 4-weeks (i.e., total intervention period of 8 hours) may not have been long enough to make significant changes among participants. Many similar studies and program evaluations with significant outcomes had program sessions occurring more than once a week (i.e., 3-5 sessions per week; Bean et al., 2015; Crimarco et al., 2018; Hills et al., 2015; National Association for Sport and Physical Education & American Heart Association, 2010) and/or over a longer period (i.e., 8-weeks to entire school years; Crimarco et al., 2018; Dishman et al., 2004; Imai et al., 2020; Liu et al., 2015). The current findings support the results of other studies that implemented a PA program over two to six weeks, where no significant results were identified (Mazzoni et al., 2009; Zwicker et al., 2015). Therefore, future research should consider using more appropriate session intervals and an overall longer intervention to obtain significant results. Future programming may also want to consider a small enrolment fee to help create accountability with attendance, although this is dependent on the audience that the

program is trying to attract. Additionally, incentives (e.g., prizes, food, raffle) may be beneficial to promote attendance rates.

Although no significant differences were found for total difference scores pre-program to post-program, four significant differences were discovered when looking at different demographic groups. First, physical competence scores were different based on whether or not the participants reported that they take care of their health by exercising. While positive results were observed for those who *sometimes/regularly* exercise, those who exercise *most of the time/always* saw a decrease in physical competence at post-program. It is possible that the participants that selected *most of the time/always* at pre-program may have over-estimated their physical abilities, and then after undergoing the program, realized they were not as physically competent as previously thought. In contrast, those selecting that they *sometimes/regularly* exercise may have under-estimated their abilities at pre-program or felt more confident in their abilities after undergoing the intervention. Although, this is speculation and further research in this area is needed to truly understand why these groups differed. Similarly, positive results were observed for participants who reported that they take care of their health by exercising *sometimes/regularly* for leadership scores whereas those who reported *unsure/never or rarely* showed a decrease in leadership at post-program. In this case, it is possible that participants who do not exercise or exercise rarely may have been further discouraged after participating in a PA-based program. Additionally, a study by Carrol and colleagues (2007) reported that if participants view an intervention as being of no relevance to them, then their non-engagement may cause failure or low adherence.

Another outcome of the current research is that certain program locations (i.e., which school the program was held at) significantly increased or decreased participant's self-esteem difference scores. This may be because of program activities and engagement, program leaders, group dynamic, among others (Breitenstein et al., 2010; Harden et al., 2015; Sims-Gould et al., 2019). Variability between program location is typically observed across similar research as less is known about the conditions and delivery under which these programs were effective (Estabrooks et al., 2004). As such, the program leaders delivering the intervention may have played a role in program adoption and treatment fidelity (Harden et al., 2015). Additionally, previous studies have revealed that teamwork and group cohesion is positively related to improvement in self-efficacy among participants (Borrego et al., 2012; Christensen et al., 2006; Leo et al., 2010). Therefore, the locations that increased self-esteem (i.e., Ford City: Volleyball, Yoga, and Dance and Forest Glade: Strength and Fitness) may have had better implementation fidelity, stronger program leaders, more engagement from participants, and a more cohesive group of participants compared to the locations that decreased self-esteem scores (i.e., David Maxwell: Camp and Queen Victoria: Multi-Fitness).

Lastly, the ethnic background of the participants was significantly associated with physical competence scores, such that Non-White (i.e., Black, Asian, Aboriginal, Arabic) participants increased their physical competence scores at post-program compared to White participants. This outcome is in line with other research that has shown that racial minorities typically gain more benefits from different types of programming (Francis & West, 2022; Meints et al., 2019).

Limitations

This study is not without limitations. First, the current study did not achieve the desired number of matched surveys. Consistent attendance at the GOALS program was limited and, therefore, many participants missed either the first or last session of the program (i.e., a pre- or post-questionnaire), resulting in a smaller sample size. Irregular and low attendance has been commonly reported in free afterschool programming (Crimarco et al., 2018), but being cost-effective was thought to outweigh the need for an enrollment fee.

In addition, the original plan was to have the GOALS program held over a total of 5 weeks, however, due to an elementary school strike that caused facility closures, it was cut short to only 4 weeks. This closure was mid-program which resulted in the participants having a two-week break between sessions. Participants may have also missed one or two sessions causing program length to be cut even shorter. Optimal program length is not well documented, but a consistent and extended program duration is recommended for future research.

Furthermore, this study depended exclusively on participant's self-reports, which is prone to reporting biases associated with social desirability (Cairney et al., 2014), entry error, and memory recall (Althubaiti, 2016). The self-reported nature of the data collection may have influenced the current results due to over- and under-estimating their physical competence, self-esteem, and/or leadership skills (Rosenman et al., 2011). Coupled with participant self-reports, the pre- and post-program survey were administered by program leaders and not research personnel. Therefore, there was no way to know whether the surveys were implemented in the same manner and with the same

amount of understanding, support, and enthusiasm. Future research may want to include more objective measures; however, self-reported data collection methods administered by the program leaders are cost-effective and easy to administer (Tugault-Lafleur et al., 2017) and, therefore, were utilized for the current study.

Lastly, the GOALS program implementation fidelity was not measured, therefore, the degree to which the intervention was delivered as intended and the successful translation of the evidence-based interventions into practice cannot be accounted for (Carroll et al., 2007; Mihalic, 2004). Previous research has suggested that the fidelity with which an intervention is implemented affects how well it succeeds (Elliot & Mihalic, 2004; Mihalic, 2004). Although, few researchers have reported their procedures for monitoring implementation fidelity, and even fewer have evaluated the validity of those strategies (Breitenstein et al., 2010; Stein et al., 2007), for these reasons, this method was not utilized for the current study. However, future research may want to consider implementing the same activity across all locations to consistently re-evaluate the GOALS program.

Conclusion

In conclusion, a program evaluation was conducted to determine whether a leadership-based physical activity program elicited changes in girls' physical competence, self-esteem, and leadership. Overall, the GOALS program had no effect on participants' total physical competence, self-esteem, or leadership self-reported scores pre- and post-program. However, significant results were observed for physical competence and leadership difference scores among those who reported taking care of their health by exercising, as well as self-esteem difference scores for different program

locations. Lastly, physical competence scores were significant by ethnicity. It is important for researchers to understand the need for all-girl physical activity programs that focus on improving life skills. It is also crucial that the design and implementation of these programs is executed in a way that has significant positive effects for participants. Although minimal differences were observed, many positive findings and future considerations for program design, administration, and targeted outcomes are recommended for future program implementation.

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Tables

Table 1. Demographics

Characteristic	Frequency (n)	Percentage (%)
Race/Ethnicity		
White (I.e., Canadian, English, French, Italian, Polish)	46	58.2
Aboriginal (I.e., First Nations, Metis, Inuit)	1	1.3
Black (I.e., African-Canadian, African-American, African, Nigerian)	4	5.1
Chinese, Korean, Japanese	2	2.5
Arabic (I.e., Lebanese, Jordan, Palestinian, Egyptian, Iraqi, Syrian)	3	3.8
South Asian (I.e., Irani, Indian, Pakistani, Sri Lankan, Nepali)	4	5.1
I don't know	13	16.5
Multiracial (I.e., Black and South Asian)	2	2.5
Estimated Mean Family Income*		
Less than $34,999	2	2.5
$35,000 - $39,999	18	22.8
$40,000 - $44,999	35	44.3
$45,000 - $49,999	13	16.5
More than $50,000	11	13.9
Went to the School that the Program was held at.		
Yes	32	40.5
No	47	59.5
Age (Years)	9.6 (2.0)**	5-13***
5	1	1.3
6	5	6.3
7	6	7.6
8	7	8.9
9	19	24.1
10	17	21.5
11	6	7.6
12	13	16.5
13	5	6.3
Grade Level	4.8 (1.9)**	1-8***
1	5	6.3
2	5	6.3
3	9	11.4
4	15	19
5	19	24.1
6	7	8.9
7	14	17.7
8	5	6.3

Note. *Derived from school-level forward sortation code and Statistics Canada census of mean household income; **Mean and standard deviation; ***Range.

Table 2. General Physical Activity and Healthy Behaviours of Participants (Pre- and Post-Program)

Question	Response	Pre-Program	Post-Program	Significance (p - value)
Do You Currently Participate in any School Sports?	Yes, *n* (%)	33 (42.3)	38 (48.7)	**$p < 0.001$[a]**
	No, *n* (%)	45 (57.7)	40 (51.3)	
Do You Currently Participate in any Community Based Club Sports?	Yes, *n* (%)	41 (53.9)	45 (59.2)	**$p = 0.027$[a]**
	No, *n* (%)	35 (46.1)	31 (40.8)	
Do You Currently Participate in any Regular Physical Activity that is not Considered a Sport?	Yes, *n* (%)	39 (50.0)	37 (47.4)	**$p < 0.001$[a]**
	No, *n* (%)	39 (50.0)	41 (52.6)	
Why do you Not Participate in any Regular Physical Activity that is not Considered a Sport?	Cost, *n* (%)	4 (5.1)	3 (3.8)	
	Transportation, *n* (%)	5 (6.3)	1 (1.3)	
	Time, *n* (%)	12 (15.2)	10 (12.7)	
	Availability, *n* (%)	9 (11.4)	9 (11.4)	
	I do not like physical activity, *n* (%)	7 (8.9)	6 (7.6)	
	Other, *n* (%)	1 (1.3)	4 (5.1)	
You Take Care of Your Health by Choosing Healthy Snacks.	Unsure/Never/Rarely, *n* (%)	7 (8.9)	14 (17.7)	$p = 0.469$[b]
	Sometimes/Regularly, *n* (%)	40 (50.6)	31 (39.2)	
	Most of the Time/Always, *n* (%)	31 (39.2)	34 (43.0)	
You Take Care of Your Health by Exercising.	Unsure/Never/Rarely, *n* (%)	10 (12.7)	14 (17.7)	$p = 0.658$[b]
	Sometimes/Regularly, *n* (%)	37 (46.8)	27 (34.2)	
	Most of the Time/Always, *n* (%)	31 (39.2)	38 (48.1)	
You Take Care of Your Health by Getting Enough Sleep.	Unsure/Never/Rarely, *n* (%)	12 (15.2)	17 (21.5)	$p = 0.350$[b]
	Sometimes/Regularly, *n* (%)	23 (29.1)	29 (36.7)	
	Most of the Time/Always, *n* (%)	43 (54.4)	33 (41.8)	

Note. Bolded typeface indicates significant association, $p < 0.05$.
[a] Chi-square analyses were used to assess significance.
[b] Paired-samples t-test were used to assess significance.

Table 3. Pre- and Post-Program Physical Competence, Self-Esteem, and Leadership Scores, by Demographics

Characteristic/Response Options		Physical Competence (*/40)[a]		Self-Esteem (*/40)[b]		Leadership (*/30)[c]	
		Pre-Program (N = 78)	*Post-Program (N = 78)*	*Pre-Program (N = 77)*	*Post-Program (N = 77)*	*Pre-Program (N = 78)*	*Post-Program (N = 78)*
		Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)
Race/Ethnicity (*N* = 75)	White (*n* = 46)	**30.0 (6.3)**	**28.1 (6.5)[d]**	31.6 (4.8)	31.5 (4.8)	19.5 (5.2)	18.5 (5.5)
	Non-White (*n* = 16)	**30.0 (6.2)**	**31.2 (6.3)[e]**	30.7 (5.7)	31.0 (6.6)	20.9 (3.7)	21.2 (4.0)
	I don't know (*n* = 13)	**28.0 (7.2)**	**27.1 (7.2)[d,e]**	30.7 (4.5)	30.3 (5.7)	21.1 (3.1)	18.4 (6.0)
Estimated Mean Family Income (*N* = 79)*	Less than $34,999 (*n* = 2)	35.0 (7.1)	34.5 (6.4)	34.5 (7.8)	32.0 (7.1)	23.0 (1.4)	20.0 (2.8)
	$35,000 - $39,999 (*n* = 18)	30.3 (5.2)	27.4 (6.3)	30.0 (5.3)	30.2 (4.8)	18.2 (3.5)	16.8 (4.2)
	$40,000 - $44,999 (*n* = 35)	28.9 (7.0)	29.3 (6.5)	30.6 (5.4)	31.2 (6.0)	20.2 (5.0)	19.6 (5.4)
	$45,000 - $49,999 (*n* = 13)	29.3 (7.2)	27.9 (8.2)	31.8 (2.9)	31.5 (4.8)	21.4 (5.1)	19.8 (6.3)
	More than $50,000 (*n* = 11)	31.8 (4.9)	29.4 (5.7)	34.6 (2.8)	33.7 (3.8)	21.7 (4.3)	20.5 (5.8)
Grade Level (*N* = 79)	1 (*n* = 5)	28.0 (2.7)	27.8 (6.4)	32.4 (7.5)	32.6 (3.9)	19.0 (2.4)	22.4 (3.6)
	2 (*n* = 5)	27.8 (7.3)	22.2 (5.8)	32.6 (4.6)	29.8 (2.6)	18.0 (6.4)	14.2 (9.1)
	3 (*n* = 9)	27.9 (6.7)	26.7 (7.0)	31.6 (4.2)	34.1 (3.1)	21.6 (4.4)	19.0 (4.5)
	4 (*n* = 15)	30.3 (7.0)	28.7 (7.5)	31.7 (3.5)	31.7 (4.9)	19.9 (4.2)	18.4 (5.0)
	5 (*n* = 19)	30.7 (6.5)	30.0 (6.5)	32.9 (4.8)	32.8 (5.5)	21.2 (5.1)	20.2 (5.6)
	6 (*n* = 7)	29.7 (7.8)	29.4 (8.0)	28.1 (7.6)	27.9 (8.3)	19.6 (5.1)	19.3 (5.7)
	7 (*n* = 14)	30.4 (6.5)	30.6 (5.1)	29.5 (4.7)	29.8 (5.5)	18.9 (2.7)	17.9 (3.5)
	8 (*n* = 5)	31.2 (4.2)	31.2 (3.9)	31.4 (2.6)	29.8 (4.7)	23.0 (5.1)	22.2 (6.3)
Program Location (School) (*N* = 79)	Anderdon (*n* = 9; 28% of total participants)	30.3 (7.8)	28.3 (9.6)	**32.0 (2.6)**	**31.6 (5.4)[d,e]**	22.7 (4.0)	19.6 (6.9)
	David Maxwell (*n* = 13; 57% of total participants)	32.1 (4.3)	29.9 (4.6)	**31.5 (5.0)**	**29.8 (5.2)[e]**	18.6 (3.3)	16.9 (4.6)
	Ford City (*n* = 11; 41% of total participants)	29.3 (5.8)	29.4 (5.7)	**28.7 (4.3)**	**32.0 (3.1)[d]**	20.0 (3.1)	19.0 (4.6)
	Forest Glade (*n* = 8; 29% of total participants)	25.3 (4.6)	23.5 (6.4)	**28.1 (4.9)**	**32.0 (3.1)[d]**	18.6 (4.8)	18.9 (4.2)
	Glenwood (*n* = 12; 50% of total participants)	29.8 (7.3)	28.8 (6.4)	**32.8 (6.5)**	**33.9 (6.7)[d,e]**	21.3 (3.6)	20.4 (4.2)
	John Campbell (*n* = 7; 26% of total participants)	32.6 (6.2)	31.0 (6.2)	**30.8 (4.2)**	**32.4 (5.1)[d,e]**	21.2 (6.4)	19.6 (6.6)
	Kingsville (*n* = 3; 21% of total participants)	22.0 (10.1)	26.0 (10.4)	**27.7 (7.5)**	**26.3 (9.3)[d,e]**	14.0 (3.5)	12.3 (2.5)
	Queen Victoria (*n* = 7; 30% of total participants)	32.6 (4.1)	30.9 (6.7)	**33.9 (3.5)**	**30.7 (5.1)[e]**	22.0 (5.7)	19.7 (7.8)
	Roseland (*n* = 9; 35% of total participants)	28.7 (6.2)	29.4 (7.0)	**34.1 (3.7)**	**32.1 (4.2)[d,e]**	20.2 (6.1)	21.8 (4.5)
Do you go to the School that the Program was Held At? (*N* = 79)	Yes (*n* = 32)	30.3 (6.3)	29.1 (6.0)	29.8 (5.1)	30.5 (5.5)	19.0 (4.8)	17.3 (5.1)
	No (*n* = 47)	29.6 (6.5)	28.6 (7.0)	32.3 (4.6)	32.0 (5.2)	21.0 (4.4)	20.4 (5.2)
Do you Participate in School Sports? (Pre-Program) (*N* = 79)	Yes (*n* = 34)	31.5 (5.4)	31.0 (5.3)	30.9 (5.1)	31.4 (5.7)	21.3 (4.8)	21.2 (4.9)
	No (*n* = 45)	28.6 (6.8)	27.2 (7.1)	31.6 (4.9)	31.4 (5.1)	19.3 (4.3)	17.6 (5.2)
Do you Participate in Community/Club-Based Sports? (Pre-Program) (*N* = 78)	Yes (*n* = 42)	29.4 (7.0)	29.0 (7.3)	31.3 (5.2)	31.6 (5.8)	20.1 (4.7)	19.6 (5.6)
	No (*n* = 36)	30.4 (5.7)	28.7 (5.8)	31.1 (4.5)	31.2 (4.9)	20.1 (4.4)	18.4 (5.1)
Do you Participate in Physical Activity (Not Considered a Sport)? (Pre-Program) (*N* = 79)	Yes (*n* = 39)	28.8 (5.6)	28.4 (6.4)	30.8 (5.4)	30.8 (5.5)	20.2 (4.7)	19.6 (5.3)
	No (*n* = 40)	30.9 (6.9)	29.2 (6.8)	31.9 (4.4)	32.0 (5.1)	20.2 (4.6)	18.6 (5.5)
Healthy Behaviours - Healthy Eating (Pre-Program) (*N* = 78)	Unsure/Never/Rarely (*n* = 7)	25.8 (7.6)	26.0 (7.0)	28.1 (7.0)	30.4 (5.5)	15.3 (3.4)	17.0 (5.9)
	Sometimes/Regularly (*n* = 40)	29.0 (6.3)	28.3 (6.4)	31.4 (4.7)	31.1 (5.5)	20.4 (4.2)	19.2 (4.4)
	Most of the Time/Always (*n* = 31)	31.6 (5.8)	30.0 (6.8)	32.0 (4.6)	31.9 (5.2)	21.1 (4.8)	19.7 (6.3)
Healthy Behaviours - Exercise (Pre-Program)	Unsure/Never/Rarely (*n* = 10)	**25.1 (6.7)**	**25.4 (5.7)[d,e]**	32.2 (3.6)	30.7 (3.8)	**19.5 (5.0)**	**15.6 (5.6)[d]**
	Sometimes/Regularly (*n* = 37)	**27.8 (5.8)**	**28.1 (6.3)[d]**	29.7 (5.1)	29.8 (5.5)	**19.3 (4.0)**	**19.4 (4.2)[e]**
	Most of the Time/Always (*n* = 31)	**33.5 (4.9)**	**30.6 (6.8)[e]**	33.1 (4.6)	33.4 (5.0)	**21.6 (5.0)**	**20.2 (6.1)[e,d]**
Healthy Behaviours - Sleep (Pre-Program) (*N* =	Unsure/Never/Rarely (*n* = 12)	27.8 (7.3)	26.0 (7.5)	29.6 (6.3)	29.2 (7.0)	19.1 (3.5)	18.2 (4.7)
	Sometimes/Regularly (*n* = 23)	28.4 (7.2)	27.9 (6.7)	29.4 (4.7)	28.9 (5.4)	17.7 (4.4)	18.1 (5.7)
	Most of the Time/Always (*n* = 43)	31.0 (5.4)	30.0 (6.1)	32.9 (4.2)	33.3 (4.0)	21.8 (4.4)	20.1 (5.3)
TOTAL OVERALL SCORES		29.9 (6.4)	28.9 (6.6)	31.3 (4.9)	31.2 (5.2)	20.2 (4.6)	19.2 (5.3)

Note. Bolded typeface indicates significant association, $p < 0.05$.

[a] Children's Perceived Competence Scale - Physical Competence Section (10-40; higher values indicate more physical competence)

[b] Children's Perceived Competence Scale - Self-Esteem Section (10-40; higher values indicate more self-perceived self-esteem)

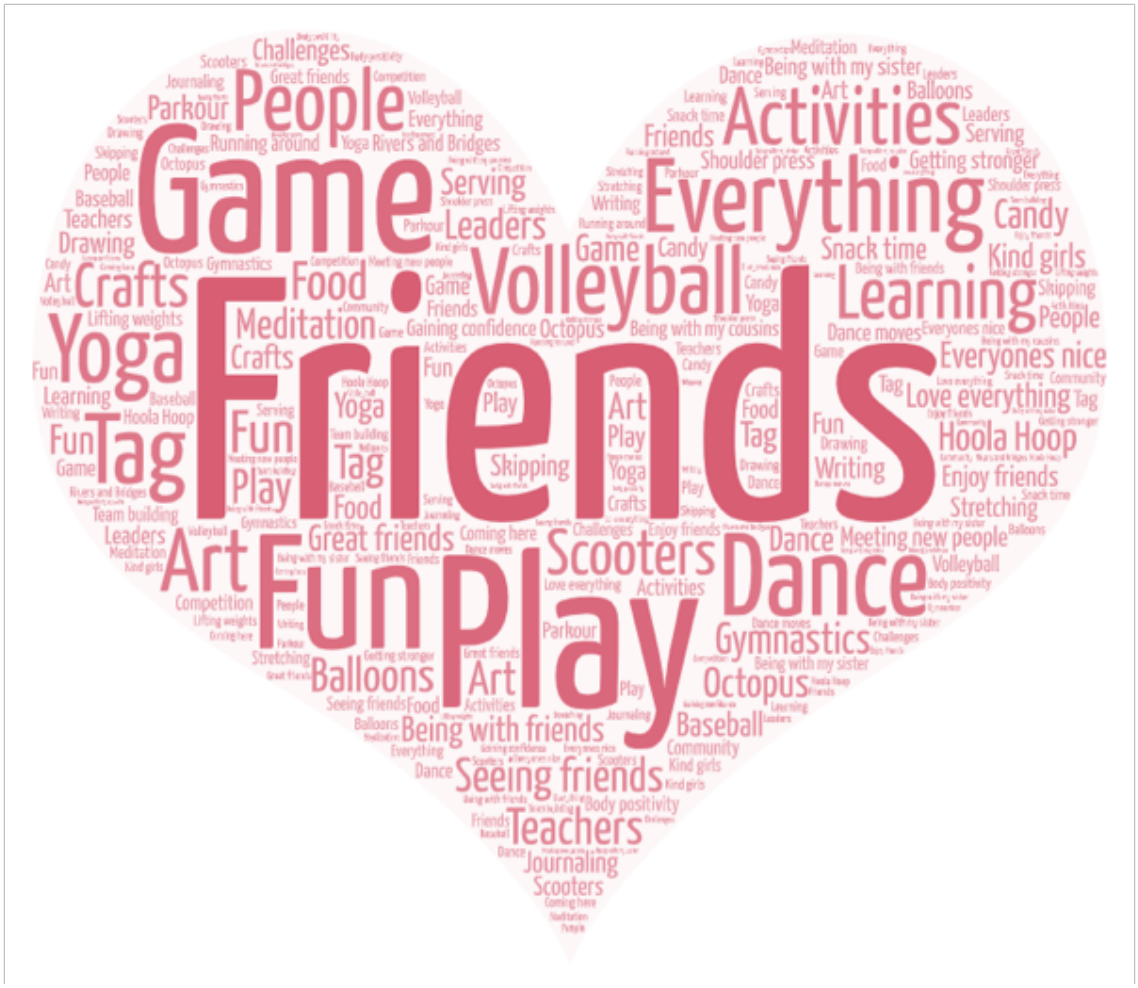
[c] The Raising Healthy Eating and Active Living Kids in Alberta Survey (0-30; higher values indicate more self-perceived leadership)

[d, e] Differing subscript letters indicate significant differences, $p < 0.05$

*Derived from school-level forward sortation code and Statistics Canada census of mean household income.

Figures

Figure 1. What Participants Loved About the GOALS Program



Review of Literature

Physical activity (PA) is a key factor in maintaining health across a life-course (Bangsbo et al., 2019), having numerous physical, social, and cognitive health benefits among children (Carson et al., 2017) and adolescents (Janssen & Leblanc, 2010). Regular PA is related to improvement in cholesterol levels (Silva et al., 2016), blood pressure (Hegde & Solomon, 2015), body composition (Buckinx et al., 2021), bone and muscle density (Tobias et al., 2014), sleep quality (Kline, 2014), and aspects of mental health including self-esteem, depression, and anxiety (Janssen & Leblanc, 2010). PA also helps in the prevention of several types of cancer (Patel et al., 2019) and reduces the risk of chronic diseases, such as cardiovascular disease (Lavie et al., 2019), diabetes (The Canadian Diabetes Association, 2022), systemic inflammation (Burini et al., 2020), osteoporosis (El-Kotob et al., 2020), osteoarthritis (El-Kotob et al., 2020), and dementia (Alzheimer Society of Canada, 2022).

Conversely, sedentary behaviour, in particular screen time, is negatively associated with healthy growth and development in these age groups (Poitras et al., 2017). For example, time spent watching television is linked to an increased risk of obesity, hypertension, and poorer scores in psychosocial health indicators such as body-satisfaction (Tremblay et al., 2010). Increased sedentary behaviour is also associated with insufficient PA during childhood and adolescence (Katzmarzyk et al., 2001; Tremblay et al., 2011). Inadequate PA levels and increased prevalence of obesity in children and adolescents has become a global issue (World Health Organization (WHO), 2020). Moreover, insufficient PA is also associated with many negative outcomes in children and adolescents, including increased risk of elevated cardiometabolic risk factors

(Ekelund et al., 2012), poorer cognitive function (Biddle et al., 2019), and lower academic achievement (Álvarez-Bueno et al., 2017; Trudeau & Shephard, 2008).

In Canada, recommendations on PA, sedentary behaviour, and sleep are outlined in the *Canadian 24-Hour Movement Guidelines for Children and Youth* (Canadian Society for Exercise Physiology (CSEP), 2019). The guidelines recommend that children aged 5 to 17 years accumulate at least 60 minutes of moderate-to-vigorous physical activity (MVPA) per day (CSEP, 2019). This can be accomplished through a range of activities such as biking, swimming, or playing a sport. In addition, several hours of light PA through structured and unstructured activities is advised (e.g., walking, household chores, playing with a pet; CSEP, 2019). It is also recommended that children and adolescents (i.e., 5 to 17 years of age) limit their recreational screen time to no more than 2 hours per day and receive about 9 to 11 hours of uninterrupted sleep each night (CSEP, 2019).

However, most children and adolescents in Canada do not accumulate the recommended 60 minutes of daily MVPA (Aubert et al., 2018; Hallal et al., 2012). In 2019, a national study reported that only about two out of five children and adolescents aged 5 to 17 years old met the recommended PA target of 60 minutes of MVPA per day (Statistics Canada, 2019). The average daily MVPA was slightly higher for children (65 minutes) compared to adolescents (61 minutes) and significantly higher for boys (77 minutes) compared to girls (49 minutes; Statistics Canada, 2019). Overall, boys (52%) were two times as likely as girls (26%) to meet the MVPA recommendation (Statistics Canada, 2019). In addition, Larouche and colleagues (2019) reported that compared with

boys, girls typically accumulate approximately 1500 fewer steps per day, complete 8 fewer minutes of MVPA per day, and spend less time outdoors.

This gender-based disparity in PA among children (Hardy et al., 2008; Troiano et al., 2008) and adolescents (Hallal et al., 2012; Pearce et al., 2012; Telford et al., 2016; Vella et al., 2014), whereby girls are less physically active than boys, is a persistent finding in the literature (Bauman et al., 2012; Colley et al., 2017; Garriguet et al., 2016; On the Move, 2013). For example, a study in 2017 reported that girls are overall less active than boys while also having less favourable individual attributes associated with PA (e.g., lower cardio-respiratory fitness, poor eye-hand coordination, and less perceived competence in physical education; Telford et al., 2016). Telford and colleagues (2016) also found that girls participate in less sport and active extracurricular activities compared to boys, which is concerning as extracurricular sport is a main contributor to PA among children. Even further, Canadian Women and Sport (2020) released results from a national study indicating that sport participation levels decrease as children age, with girls of all-ages having overall lower participation levels compared to boys (i.e., 58% of girls vs. 68% of boys aged 9-12, 47% of girls vs. 64% of boys aged 13-15, and 38% of girls vs. 56% aged 16-18 participate in sports weekly). Furthermore, among girls who have participated in sport, about 1 in 3 girls will drop out of sports by late adolescence, whereas the dropout rate for adolescent boys is only 1 in 10 (Canadian Women and Sport, 2020). Overall, sport participation rates for Canadian girls decline steadily from childhood to adolescence with as many as 62% of girls not playing sport at all (Canadian Women and Sport, 2020). These rates call for concern as research has shown that behavioural patterns formed in early childhood have implications throughout the duration

of a life course and persist in the mature stages of life (Blair et al., 2001; Jones et al., 2013). Learning fundamental movement skills and how to physically train during these early years is critical to lifelong PA (On the Move, 2013; Stafford, 2005). In addition, it is important that girls continue to maintain and enhance their physical fitness as it the foundation for establishing a physically active lifestyle throughout adulthood (Blair et al., 2001; Jones et al., 2013).

Research has shown that the Window of Optimal Trainability (e.g., stamina, strength, speed, skills, flexibility) for girls occurs between the ages of 6 to 13 years (Azir & Ramli, 2021; Stafford, 2005; Telford et al., 2016). Unfortunately, adolescence is often marked as a highly sensitive and complex period of transition from childhood to adulthood (Corr et al., 2018). As such, many different types of barriers to PA and sport exist for girls. The most frequent PA barriers are lack of support from peers (Allison et al., 2017; Corr et al., 2018; Martins et al., 2015), family (Corr et al., 2018; Martins et al., 2015; Rees et al., 2006), and teachers (Allender et al., 2006; Allison et al., 2017; Standiford, 2013), lack of time (Al-Hazzaa, 2018; Allison et al., 2017, Martins et al., 2015), lack of perceived competence (Corr et al., 2018; Martins et al., 2015; Stankov et al., 2012), discomfort during and after PA (Rees et al., 2006; Standiford, 2013; Stankov et al., 2012), preference for other leisure activities (Allison et al., 2017; Martins et al., 2015; Standiford, 2013), and high costs of activities available (Martins et al., 2015; Standiford, 2013). In addition, other studies have shown that body image perception is another common barrier for girls (Duffey et al., 2021; Standiford, 2013). Girls often feel uncomfortable while participating in PA due to concerns of their appearance and may experience discomfort linked to the type of clothing they wear (Allender et al., 2006;

Allison et al., 2017). In addition, biological changes experienced by adolescent girls during puberty (i.e., menstruation) can lead to discomfort and a heightened sense of self-consciousness which may further discourage PA participation in this age group (Corr et al., 2018). This is consistent with previous research indicating that negative body image and dissatisfaction is common among girls, contributing to negative perceptions and experiences around PA participation (Cowley et al., 2021; Fernandez-Bustos et al., 2019). Positive body image conversations with adolescent girls may be one way to foster improved body satisfaction (Hart & Chow, 2020), which may also aid in increased PA levels.

Main Influencers for Girls in PA

Increasing engagement in PA is a complex issue since exercise-related behaviours are often multifaceted (Zhang et al., 2015). The Social-Ecological Model (SEM) has become a useful tool for exploring the multiple factors involved in PA participation and adherence rates in children and adolescents (McLeroy et al., 1988; Zhang & Solmon, 2013). The SEM and other studies suggest that PA in children and adolescents can be influenced by several correlates, such as intrapersonal, interpersonal, organizational, and the environment (Bauman et al., 2012; Hu et al., 2021; McLeroy et al., 1988; Sallis et al., 2006). Application of the SEM can help improve PA participation by examining all these factors which may influence an individual's decision to participate in PA at an adequate level (Abdelghaffar et al., 2019; Bissell et al., 2018).

Intrapersonal

Regarding the intrapersonal factor (e.g., gender, age, knowledge), the SEM suggests aiming to target the person's attitudes, behaviour, self-concept, or skills at the

individual level (Hu et al., 2021; McLeroy et al., 1988). To educate children on the importance of PA and give them the required skills, many countries have begun to push the concept of physical literacy (PL; Castelli et al., 2015; Tremblay et al., 2018a, b). PL is thought to contribute to the achievement of a healthy, active lifestyle while helping children meet PA and sedentary behaviour guidelines (Belanger et al., 2018). The International Physical Literacy Association (2017) defines PL as "the competence to perform movement skills and the knowledge, motivation, confidence, and understanding to value and take responsibility for engagement in PA across the lifespan." Physical and Health Education Canada (2017) states that physically literate children can move with confidence and competence in a wide variety of physical activities in multiple environments (e.g., land, snow, water, ice). Although many educational systems have begun to incorporate PL into their schools (Castelli et al., 2015; Tremblay et al., 2018a, b), a global consensus has found that PL is still lacking (Edwards et al., 2018).

In Canada, interest in PL has rapidly increased and many different programs and policies are emerging to try to improve nationwide PL in children and adolescents (Tremblay & Lloyd, 2010; Tremblay et al., 2018b). PL research and intervention in children is important as this stage is a critical period for the development of gross-motor skills, fine motor skills, coordination, and confidence (Belanger et al., 2018). The first large sample of PL levels in Canadian children found that there were no large differences between boys' and girls' total PL scores or the individual domain scores, but overall, the total PL scores were at the "progressing" level (i.e., not adequate, low; Tremblay et al., 2018b). However, a similar study with 2,956 Canadian children found that boys had significantly higher PL scores compared to girls (Belanger et al., 2018). Results from this

study also revealed that children were at increased odds of meeting PA guidelines if they achieved the minimum recommended level of PL, and those children who met PA guidelines had higher scores in overall motivation and confidence (Belanger et al., 2018).

In addition, it is important to note that besides PL levels, ethnicity and age affect PA rates among girls. Indigenous girls report the lowest amount of sports participation (24%), followed by girls identifying as Asian or White (32-35%) or Black (45%; Canadian Women and Sport, 2020). Participation rates in sports decrease as girls age (e.g., there is a 22% difference in the participation rates between girls aged 9–11 years old and those aged 15–18 years old; Canadian Women and Sport, 2020). As consistently shown in research, PA rates typically decline in girls and women as they age (Mayo et al., 2020; Pate et al., 2022; Statistics Canada, 2019; Telford et al., 2016). Therefore, to improve these results, it is recommended that gender-, ethnicity-, and age-specific strategies and educational opportunities be identified and promoted to help enhance intervention strategies which will ultimately improve physical literacy and PA participation among children and adolescents (Hu et al., 2021; McLeroy et al., 1988).

Interpersonal

The interpersonal factor focuses on the social environments (e.g., social networks and support systems) of children and adolescents (Hu et al., 2021; McLeroy et al., 1988; Zhang & Solmon, 2013). The social environment of children and adolescents includes the influence of parents, siblings, friends, teachers, coaches, and role models (Markward et al., 2003; Osterling & Hines, 2006).

Family and Friends. Those reporting low social support from family and friends are more likely to be insufficiently active compared to those with higher levels of social

support (Trost et al., 2002). Parents profoundly influence children's overall development, including their participation and adherence rates in both sedentary behaviour and PA (Welk et al., 2003). This is especially true for younger children compared to older children (Vaughn et al., 2013; Welk et al., 2003). Parents with greater PA levels are associated with greater level of PA in their children (Yao & Rhodes, 2015). Research has shown that the more parents move throughout the day, the more their children move as well as children are known to mirror their parents' behaviours (ParticipACTION, 2021). Additionally, strong associations between parental support and the level of PA their child participates in have been reported (Gustafon & Rhodes, 2006), indicating that effective support and encouragement can be essential in improving PA rates. Therefore, identifying key parental correlates of PA can improve interventions designed to increase the proportion of children who meet PA guidelines (Rhodes et al., 2020). Previous literature focusing on role modelling has typically examined the associations between sedentary behaviour and PA of parents and children (Vaughn et al., 2013; Yao & Rhodes, 2015). Parental modelling is thought to be an important correlate of children's PA because of the social norms it creates within the family unit (Yao & Rhodes, 2015).

While parents are the most important source of influence in early life, as the child progresses into adolescence, they spend a significant portion of their time at school with friends (Sawka et al., 2013). Research has shown that sports participation (Ali et al., 2011) and sedentary habits (De la Haye et al., 2010) of a friend or group of friends influence an individual's behaviour. Higher PA rates within friendship groups are associated with higher levels of participation among individual group members (Chung et al., 2017; Macdonald-Wallis et al., 2012; Sawka et al., 2013). Some reasons to explain

these findings could be due to peer pressure (i.e., imposing a certain behaviour on a peer), group norms (i.e., underlying attitudes and behaviours shared among a group), co-participation (i.e., undertaking a behaviour with a peer to feel more connected), and behavioural modelling (i.e., observing a peer perform a behaviour leading to increased motivation to perform a behaviour; Sawka et al., 2013; Valente, 2010). Interestingly, peer networks have been shown to have a greater influence on PA and sedentary behaviour for boys compared to girls (Sawka et al., 2013). In addition, literature has shown that boys receive more support from their peers to engage in PA than girls do and that girls reported receiving little peer support for PA in general (St. George & Wilson, 2012). Therefore, it is important to change these trends as adolescents who receive peer support show higher odds of engaging in five or more days of moderate PA, as well as three or more days of vigorous PA per week (Haider et al., 2019).

Teachers and Coaches. In addition to family and friends, teachers and coaches play a significant role in providing and promoting PA for school-aged children (Institute of Medicine, 2013). Teachers are essential for creating positive environments by providing PA opportunities inside and outside of the classroom (Daly-Smith et al., 2020; Webster et al., 2015). As children and adolescents spend a significant portion of their lives being instructed by teachers (Verhoeven et al., 2019), teacher support is vital to students' overall development (Lei et al., 2018). Past research has indicated that teacher support can introduce or help children and adolescents explore new ideas, activities, or possibilities (Kaplan & Flum, 2012; Rich & Schachter, 2012; Schachter & Galili-Schachter, 2012). Although students tend to work and complete tasks based on their interests and values, studies have shown that people close to them commonly influence

their related emotions and motivations (Ryan & Deci, 2000). For this reason, teachers' PA promoting practices can positively impact their students' PA behaviours (Webster et al., 2015). Teachers have also been shown to be prominent in increasing PA rates among children and adolescents as they educate them on the importance of adequate PA (Cheung, 2020; Institute of Medicine, 2013) and determine how physical education lessons are conducted (Institute of Medicine, 2013). Their behaviour during PA lessons and physical education classes influences students' behaviours regarding motivation (Cheon et al., 2012), enthusiasm (Vidourek et al., 2011), and excitement toward learning outcomes (Yilmaz, 2011). When teachers demonstrate motor skills and participate in PA with students, children can reach higher levels of motivation (Vidourek et al., 2011). Both boys and girls have been found to be more physically active when teachers provide a role model for fitness (Smuka, 2012). Conversely, children are less physically active when supervised by passive teachers (e.g., primarily sit down or stand still during PA lessons; Brown et al., 2009; Cheung, 2020).

Moreover, coaches have considerable reach, as a high proportion of children and adolescents participate in organized sports (Tremblay et al., 2014). For this reason, coaches are key leaders in increasing PA rates among children and adolescents as they provide the structure that contributes to the percentage of active time during practices (Guagliano et al., 2014). Past research has shown that children who participate in organized sports have higher PA rates compared to non-participating counterparts (Logan et al., 2020; Shull et al., 2020) and accumulate more PA during sport days compared to non-sport days (Nelson et al., 2011; Shull et al., 2020; Wickel & Eisenmann, 2007). Although participation in sport provides an ideal environment for children and

adolescents to accumulate the recommended amount of PA (Guagliano et al., 2014), studies have found that athletes spend large proportions of time at practice being inactive or in light PA (Guagliano et al., 2013; Leek et al., 2011; Sacheck et al., 2011). For instance, for about 43% of the time during training sessions, players have been shown to be inactive where more focus is placed on competition (e.g., knowledge delivery contexts) rather than overall PA (Guagliano et al., 2013; Katzmarzyk et al., 2001). This may be due to many coaches believing that girls might drop out of sports if PA intensity is too high during training sessions (Guagliano et al., 2014). This is unfortunate as coaches are in an ideal position to impact the health and well-being of children and adolescents (Guagliano et al., 2014). Coaches carry considerable influence, as they are viewed as experts by their athletes (Coatsworth & Conroy, 2006). Furthermore, coaches have a strong impact on children and adolescents due to the amount of direct involvement they have with their athletes every week (Smith & Smoll, 1997; Wekesser et al., 2021). The actions and behaviours of a coach have been shown to strongly contribute to the acquisition of positive aspects of sports participation (Fraser-Thomas & Cote, 2006; Hedstrom & Gould, 2004). On the contrary, coaches can also have significant negative outcomes on their players' enjoyment, self-perception, and continued participation in sports and other types of PA (Fraser-Thomas & Cote, 2009; Wiersma & Sherman, 2005). Young athletes in other studies have ranked their coach as the most influential person in deciding to withdraw from sports (Rottensteiner et al., 2013), where one study found that coaches influenced nearly one-third of athletes to withdraw from their preferred sport (Armentrout & Kamphoff, 2011). Therefore, coaches need to create a positive environment (e.g., fun, supportive) and foster the development of life skills for their

athletes (Vella et al., 2011). A coach's perceived level of coaching efficacy has also been shown to influence the attitudes, performance, and well-being of players (Gilbert et al., 2006). By targeting components of coaching efficacy and effectiveness, sports organizations may continue to contribute positively to emerging needs of physical health alongside well-known aspects of psychosocial health (Cohen et al., 2020). Although it is important to note that most sport programs primarily utilize volunteer coaches, who often have little coaching experience or training (Coatsworth & Conroy, 2006). Therefore, providing additional structured training for coaches may enhance the skills necessary to limit negative outcomes.

Mentors and Role Models. Peers who are close in age (i.e., slightly older), mentors, high performance athletes, and celebrities can also influence children and adolescents to participate in PA (Canadian Women in Sports, 2020). These influencers can help enhance participation and the quality of experiences in several ways, including enrolment, providing feedback, and education (Canadian Women in Sports, 2020). Role modelling can be very important in helping girls develop key life skills (ParticipACTION, 2021). Research shows that it is particularly important to have same-gender role models, as women in influential positions can challenge stereotypes about gender and leadership while offering diverse insight and advice (Meier, 2015). Educating girls about relevant examples of women leaders or providing opportunities to meet these leaders in their communities would help build and strengthen leadership networks (Voelker, 2016). It may be beneficial for physical educators to invite current or former women athletes or community leaders to not only discuss leadership but also participate in PA with young girls (Voelker, 2016). Studies have shown that the most effective

programs often involve the purposeful selection of older students or athletes with common interests as the participating girls (Leyton-Armankan et al., 2012).

Organizational Factors

Organizational systems may determine an individual's decision to participate in PA (Bissell et al., 2018). The most important organizational factor that affect children and adolescents is the school they attend. Children and adolescents spend, on average, about 35 to 50 hours per week in and around school buildings (Barbosa & Oliveira, 2016). Since they spend most of their time in schools, the school environment is the ideal setting to increase the amount of time students spend in PA (Marker et al., 2018). There are multiple opportunities for children to be physically active over the school week (e.g., recess, physical education class, active travel to and from school; Watson et al., 2015). Studies have shown interventions targeting these periods may be effective in increasing children's PA levels (Ridgers et al., 2007), with the potential to help most students meet daily PA guidelines (Fairclough et al., 2012; Ridgers et al., 2007). Unfortunately, about 50-94% of the time students spend in school is predominantly sedentary with a very small proportion of time devoted to PA (Alhassan et al., 2012; Pate et al., 2008). Most commonly, the time devoted to PA at school is during the students' physical education class. Studies have shown that elementary school children are more physically active on days when they have a physical education lesson compared to days they do not (Cheung, 2019; Morgan et al., 2007; Tudor-Locke et al., 2006). However, some studies suggest that Canadian students are not receiving the physical education instructional time that they are meant to receive, and a sizeable percentage of Canadian schools use instructional time allocations as guidelines rather than mandated requirements (Barnes et al., 2012;

Hickson et al., 2012). Additionally, in the last couple of decades, walking to and from school and unorganized free play time has declined (Dollman et al., 2005). On top of that, gender disparities in PA also exist in schools, where girls are less active than boys during physical education, recess, and lunch breaks (Ridgers et al., 2012). Girls face unique gender-related barriers to participating in PA at school (Owen et al., 2017; Pearson et al., 2015). Some of these barriers include pressure to fit gender stereotypes (e.g., wrestling is appropriate for boys, but not girls), dealing with consequences of challenging traditional gender roles (i.e., being labelled a tomboy; Breger et al., 2019), being bullied, and self-consciousness in the presence of other students (Dudley et al., 2018; Watson et al., 2015). Although schools have been described as key settings for providing gender-equal and inclusive environments (Spencer et al., 2015), teachers' attitudes and beliefs tend to reinforce negative gender stereotypes rather than challenge them (Esen, 2013). For example, gendered language is commonly used by teachers (e.g., saying a student “kicks like a girl”; Valley & Graber, 2017). It is also usual for boys to dominate the choice of games during physical education classes, while teachers tend to select rules and equipment that favour highly skilled boys (Fisette, 2013). These behaviours send implicit messages that girls' voices and perspectives are not valued in school regarding PA. Gender equity training may be an important strategy to minimize gender-biased behaviours concerning PA in girls at school (Valley & Graber, 2017).

Other Important Organizational Factors. Although school is the organizational factor that has the greatest effect on children and adolescents, many other factors can also increase PA levels in girls (Bissell et al., 2018). For example, out-of-school or after-school programs have been found to increase PA levels by helping children and

adolescents engage in regular, enjoyable PA (Dzewaltowski et al., 2010; Rosenkranz et al., 2010; Weaver et al., 2015). After-school programs have been identified as convenient locations to promote PA as many children already participate in some form of after-school programming (Canadian Women and Sport, 2012). For this reason, families would likely be interested in an after-school program if it is offered in a safe environment for girls to engage in PA and develop lifelong healthy habits. There are a variety of different local, national, and universal programs that girls can participate in, for example, Girl Guides, music/art interest groups, recreational sports, and summer camps. Staff behaviours (e.g., encouragement, engagement), as well as the types of PA opportunities (e.g., free play or organized activities) and their structure (e.g., presence of lines, elimination games) all influence children's PA levels during after-school programs (Weaver et al., 2015).

It has been shown that PA promotion is most effective when staff encourages participants as well as involves themselves in the activities with the children (Beets et al., 2010; Weaver et al., 2015). These positive staff behaviours are thought to create a social environment that supports children's engagement in PA (Beets et al., 2010; Beighle et al., 2010). Another factor that can potentially influence PA levels during after-school programs is the type of PA opportunities being offered (Weaver et al., 2015). *Organized* games are a form of planned PA led by staff (e.g., duck-duck goose, volleyball, obstacle course), whereas free play activities are unplanned while supervised by staff (e.g., playground, open gym, jump rope; Trost et al., 2008). Although research in this area is limited, there is some evidence that children accumulate more PA during free play than during organized PA opportunities (Coleman et al., 2008; Trost et al., 2008).

This may be explained due to most organized games having an elimination factor as a primary component, which may decrease the girl's opportunity to be physically active for the entire duration (Foster et al., 2010; Weaver et al., 2014). In addition, single-behaviour interventions (i.e., targeting PA alone) are recommended as programs that combine PA with homework or diet interventions, for example, are typically not as effective (Canadian Women and Sport, 2012). It is thought that focusing on a single issue is typically more suited to the cognitive capacity of children and adolescents (Canadian Women and Sport, 2012). Studies have also shown that single-gender activities (i.e., girls only) may increase girls' PA engagement (Olafson, 2002; Weaver et al., 2015). Girls may prefer a single-gender program because they are embarrassed in PA settings that include boys (Olafson, 2002), have low self-esteem related to PA (Taverno Ross et al., 2013), or become uncomfortable when boys dominate PA opportunities (Carroll & Loumidis, 2001). Lastly, a lack of feelings of self-efficacy or a lack of social support from friends/families can act as barriers for girls (Canadian Women and Sport, 2012). Therefore, introducing PA programs that focus on inclusivity and enjoyment may increase overall PA levels amongst girls.

Environmental Factors

Given the importance of establishing a pattern of regular PA early in life, understanding environmental factors that affect the PA levels of young children is essential. The PA levels of children are often influenced by environmental factors such as access to public recreation space and infrastructure, access to sidewalks, and neighborhood crime (Davison & Lawson, 2006; Henderson et al., 2013). For example, one study found that children whose parents were worried about people (i.e., crime,

traffic) in the neighborhood accumulated 1250 less steps per day compared to those with parents that considered their neighbourhood safe (Larouche et al., 2019). Higher income neighbourhoods are often linked to higher PA levels which is mostly related to neighborhood safety and quality (Budd et al., 2018, Gill et al., 2017). Areas with more play equipment (e.g., parks, playgrounds; Gubbels et al., 2012; Reimers & Knapp, 2017) and overall open space (Nicaise et al., 2012) have supportive evidence in increasing PA levels. Outdoor time has been shown to be one of the largest and most consistent correlates of PA (Gray et al., 2015; Larouche et al., 2016). For instance, one study found that each additional hour spent outdoors was associated with 769 and 596 additional steps per day in boys and girls, respectively (Larouche et al., 2016). These results were comparable with those observed in an analysis of nationally representative data from the Canadian Health Measures Survey in 2012-2013.

Children from households with lower socioeconomic backgrounds and those from single parent families are more likely to be affected by PA barriers (Bagby & Adams, 2007; Budd et al., 2018; Cowley et al., 2021; Gill et al., 2017). For example, girls in homes with household incomes over $100,000 are more likely to participate in sport (62%) compared to girls in homes with incomes under $50,000 (44%; ParticipACTION, 2021). This is mostly likely due to the high prices associated with putting children and adolescents into sports (e.g., equipment, travel, fees; Rigby et al., 2020). In addition, girls living in urban areas are slightly more likely to participate in sport at younger ages compared to rural areas (59% versus 54%; Canadian Women in Sports, 2020). This may be due to parents not being about to accommodate increased travel time (Budd et al., 2018).

Life Skills and Leadership among Girls Participating in PA

In addition to organized and recreational PA being associated with favourable physical health outcomes in girls (Eime et al., 2013; Turnnidge et al., 2014), PA has also been shown to foster key life skills (Kay & Shipman, 2014). For instance, close to 90% of the fortune 500 CEO leaders who are women come from a sports background (Kay & Shipman, 2014). Many of these women report that they developed several life skills that contributed to their broader development beyond sport-specific skills (Ronkainen et al., 2021). Life skills can be defined as an individual's ability to deal effectively and adapt to the challenges of everyday life (WHO, 2020). Typically, the core set of life skills are decision making, problem solving, creative thinking, effective communication, interpersonal relationship skills, self-awareness, empathy, and coping with stress (WHO, 2020). PA has been shown to improve many of these skills, but most advancements are shown to be found in teamwork (Malm et al., 2019), goal setting (Paxton et al., 2012), time-management (Macquet & Skalej, 2015), communication (Malm et al., 2019; Nopembri et al., 2017), and problem-solving (Sozen, 2012) in a variety of individuals, but especially amongst young girls (Bean et al., 2015). Women with a sports or PA background have also reported that they are more effective at persevering through self-doubt and challenging obstacles (Herrero et al., 2020), averting perfectionism (Dweck, 2008; Kay & Shipman, 2014; Kirkwood, 2009), and leading themselves in addition to leading others around them (Kay & Shipman, 2014). Interestingly, combining PA into a leadership-focused program has shown to increase self-esteem, alleviate body image concerns, promote positive health behaviours, and overall boost PA in younger girls (e.g., Barr-Anderson et al., 2012).

Leadership is a powerful life skill that influences the future of local, national, and global communities (Voelker, 2016). Given the importance of leadership and its unquestionable positive effect, scholars have promoted the proactive development of leadership skills through PA and sport (Gould & Voelker, 2012; Martinek & Hellison, 2009). The link between sport participation and leadership is well supported (Canadian Women in Sports, 2020; Ghildiyal, 2015), commonly enhancing women's perceptions of positive attributes that are valuable in leadership positions (Canadian Women in Sports, 2020). For example, 94% of executive-level women have played a sport and about 74% of those women report that playing a sport accelerated their careers (Ernest & Young, & ESPN, 2015). Building self-leadership competency in children has proven to be effective in improving health behaviours such as diet and PA (Ferland et al., 2014; Raising healthy Eating and Active Living Kids in Alberta (REAL Kids Alberta), 2013). Leadership involves a set of skills that can be developed over time, including how to become a positive peer model, communicate effectively, motivate others, and foster group cohesion (Gould & Voelker, 2010). Increasing leadership in adolescence can reinforce self-esteem and be a catalyst for a flourishing adulthood in the future (Karagianni & Jude Montgomery, 2018). Adolescent leaders are more likely to take up managerial positions as adults, and leadership skills developed early on can have a positive impact on future wages (Kuhn & Weinberger, 2005).

Despite many positive and productive changes observed in the leadership opportunities for women and girls, they remain highly under-represented in positional leadership roles (e.g., political, and managerial roles; Canadian Women's Foundation, 2022; Voelker, 2016), especially when compared to male counterparts (Voelker, 2016).

This is even more discerning considering more than half of the Canadian population identifies as a woman (Canadian Women's Foundation, 2022). Despite research showing that companies with higher levels of gender diversity are more likely to outperform their less diverse peers on profitability (McKinsey & Company, 2020), females still represent less than 20 percent of leadership positions across many different career sectors (Canadian Women's Foundation, 2022). Some of these sectors include but are not limited to, academia, entrepreneurship, business, politics and government, law, medicine, entertainment, media, technology, the military, and sports (Gangone et al., 2013). In sports alone, only about 43 percent of head coaching positions for intercollegiate women's sports are held by women (Acosta & Carpenter, 2014). A clear need exists to promote the leadership development of girls which will in turn help narrow the gap in leadership positions during adulthood. This is an important topic as under-representation and inadequate representation in leadership contribute to ongoing marginalization and inequality (Canadian Women's Foundation, 2021). Even further, inadequate confidence levels, low self-efficacy, and lack of leadership skills among girls and women have been attributed to a lower number of women taking leadership positions in society (Kay & Shipman, 2014; Kirkwood, 2009; Niederle & Vesterlund, 2007; Sandberg, 2015). It is often not competence that girls and women are lacking, rather, the research emphasizes that confidence seems to be what is getting in the way of women succeeding in leadership positions (Kay & Shipman, 2014; Kirkwood, 2009; Niederle & Vesterlund, 2007; Sandberg, 2015). Since acknowledging this confidence gap in women, some countries have begun offering sports equity programs that address issues such as confidence building and leadership skills, while ultimately fostering active lifestyles (On the Move,

2013). Throughout Canada, both government and non-government organizations have made considerable progress in creating diverse sport equity programs to help increase the participation of young girls in sports (Canadian Women and Sport, 2018). For instance, one study observed upward leadership transformation when programmers included teaching girls the social barriers that women face in the pursuit of leadership positions, helped them understand the discriminatory practices used against women in leadership roles, and discussed examples of effective women leaders who have overcome these challenges (Hoyt & Kennedy, 2008).

Interventions for Leadership and PA in Girls

To narrow this gender gap, it is important to understand the reasons for these pre-existing disparities. Many scholars attribute this to a long history of gender discrimination in PA and leadership (Kamphoff, 2010). For instance, the traditional definition of leadership is associated with stereotypically masculine characteristics, such as independence, assertiveness, toughness, and dominance (Eagly, 2007). This idea of leadership has led to prejudicial perceptions that leadership is inherently masculine and ultimately contradicts traditional "feminine" gender roles (Eagly & Karau, 2002). As a result, women leaders are often criticized in their leadership positions for being too unfeminine (Eagly, 2007). On the reverse, women leaders who demonstrate more stereotypically feminine characteristics, such as sensitivity, nurturance, and supportive behaviours, are frequently devalued and not taken seriously in leadership positions (Eagly, 2007; Walker & Sartore-Baldwin, 2013). One study found that about one-third of girls do not aspire to be leaders because they fear angering others, being laughed at, being perceived as bossy, or becoming disliked by others (Schoenberg et al., 2008). In addition,

studies have found that adolescence can be a time when girls may lose or silence their voice (i.e., suppression of girls' thoughts and opinions; Denner et al., 2005; Harter et al., 1997). During this stage of life, girls often have conflict with their inner selves as they tend to feel a large pressure to adhere to adult gender expectations of politeness and unassertiveness (Rose & Rudolph, 2006). This may be further impacted by peer relationships where girls often prefer to preserve peer connectedness rather than speak their minds and express their true voice (Denner & Dubar, 2004; Rose & Rudolph, 2006). To contest this issue, girls must be provided with settings where they feel safe to express their views and can form trusting relationships with peers and adults (Denner et al., 2005; McNae, 2010).

Moreover, girls may initially be uncertain of their leadership ability which can ultimately rob them of the opportunity to exercise their true leadership skills (Hoyt & Kennedy, 2008). In physical education and coaching settings, it is critical to first acknowledge that girls can become great leaders. Results from a previous study that focused on a high school girls' after-school program found that developing leadership through guidance (i.e., asking stimulating questions) versus instruction alone fostered a more beneficial partnership (Denner et al., 2005). For instance, guiding questions (e.g., "what drill is best for shooting practice?") accomplished greater results rather than giving commands (e.g., "this is the drill that will be completed."). When girls are invited to participate in important group decision-making, they can examine previously unrecognized strengths and identify future leadership-development opportunities (Conner & Strobel, 2007; Denner et al., 2005). For this reason, it is suggested that educators and coaches proactively teach girls how to appropriately identify options, evaluate pros and

cons, and gather input from the group (Voelker, 2016). Providing feedback and support is another important step toward enhancing girls' confidence in their leadership ability and promoting leadership involvement (Gould & Voelker, 2012). Specifically, positive, and constructive feedback should link specific behaviours to leadership concepts (Voelker, 2016). For example, a coach could tell a player that they showed good leadership when they helped their teammate up after they fell as it shows the rest of the team how important it is to support one another. It is also important to note that many women indicate that leadership does not always need to be taught but instead is sometimes learned best through experience (Shollen, 2015).

Lastly, the on-going absence of social networks and women mentors in leadership roles has historically hindered women from attaining leadership positions (Roebuck & Smith, 2011). In addition to using relevant examples of women leaders, providing girls with the opportunity to meet women leaders would help build and strengthen leadership networks (Voelker, 2016). Physical educators and coaches should invite current or former women athletes, professionals, or community leaders to not only discuss leadership but also participate in class or practice activities (Voelker, 2016). Purposefully including women as examples of effective leaders across a range of cultural and ethnic heritages helps girls identify with different leadership roles (Hoyt & Kennedy, 2008). Examples may include women leaders in sport (e.g., Christine Sinclair; Simone Biles; Brooke Henderson), business (e.g., Oprah Winfrey; Margaret Atwood), entertainment (e.g., Celine Dion; Bela Bajaria; Beyonce), politics (e.g., Kim Campbell; Kamala Harris), and advocacy (e.g., the late Maya Angelou; Viola Desmond). When using examples of exceptional women leaders, experimental evidence suggests that drawing similarities

between young girls and identified role models is important to enhancing their leadership self-perceptions (Asgari et al., 2012). For example, teaching a girl who is an aspiring tennis player about Serena Williams (i.e., a recently retired, talented tennis player, and female leader) would be much more advantageous than teaching her about Hillary Clinton (i.e., former United States Secretary of State and Presidential Candidate). Without perceived similarities, girls may come to view the leadership accomplishments of successful women leaders as out of reach and thus minimize their leadership aspirations (Asgari et al., 2012).

Interventions for Leadership and PA in Windsor, Ontario

Many girls and women residing in Windsor-Essex County would benefit from local programs that strive to increase confidence (Kay & Shipman, 2014; Sandberg, 2015). According to an extensive national study carried out by the Centre for Policy Alternatives in 2017, Windsor, Ontario is the worst Canadian city for women when it comes to experiencing gender equality, good health, and well-being. The Centre for Policy Alternatives (2017) emphasized that the income gap between men and women, in Windsor, is larger than the Canadian average. In addition, about one in four women (24%) live below the low-income line, compared to 15% nationally (Centre for Policy Alternatives, 2017). It was particularly noted that leadership role models and opportunities for developing leadership skills in Windsor are lacking (Centre for Policy Alternatives, 2017). For example, only 23% of women are elected officials and 34% of women are senior managers in the area (Centre for Policy Alternatives, 2017). A Windsor Needs Assessment study (2016) entitled "*Positioning Women for Success*," concluded that local Windsor women in the workplace are suffering a crisis in confidence. Most

women surveyed expressed a tough time viewing themselves as leaders and did not want to apply for promotions or ask management for additional training or pay increases (Windsor Needs Assessment, 2016). This confidence deficit may be attributed to the way boys and girls are socialized in their early years or to the lack of women in visible leadership roles around the community (Windsor Needs Assessment, 2016).

In terms of health, women in Windsor are also among the least likely of all the Canadian cities surveyed to rate their health as good, with just over half (52%) doing so (Centre for Policy Alternatives, 2017). This gender-based disparity gap (i.e., monetary, health, and wellness) can only begin to alleviate when confidence is restored in girls and women. As previously discussed, sports and PA have shown great advancement in increasing girls' teamwork (Malm et al., 2019), goal setting (Paxton et al., 2012), time management (Macquet & Skalej, 2015), communication (Malm et al., 2019; Nopembri et al., 2017), and problem-solving skills (Sozen, 2012). These skills are important in fostering leadership skills (Canadian Women in Sports, 2020; Ghildiyal, 2015) and improving confidence levels (Kay & Shipman, 2014). The recent focus on girls advancing leadership skills through the means of sport is not isolated to Windsor-Essex County. Throughout other provinces in Canada and in other parts around the world (e.g., Australia, the United Kingdom) government and non-government organizations have made considerable progress in creating diverse sport equity programs for girls (Canadian Women in Sport, 2020). In addition to enhancing young girls' physical capabilities, these programs aim to increase confidence and leadership skills.

Leadership Advancement for Women and Sports (LAWS)

LAWS is a non-profit organization in Windsor, Ontario created to help girls and women advance in their leadership opportunities through sport or fitness interest, whether as an athlete, coach, or official. The founders of the initiative noticed that despite the many strides women have made in sports, there are still barriers standing in their way. Some of these barriers include a lack of women coaches, discrimination against women, and media that promotes and idolizes the "perfect" body. This has caused girls and women to be excluded from sports or feel uncomfortable about pursuing PA, preventing the development of women leaders. While LAWS is aimed at women in Windsor-Essex County, the initiative supports women and girls everywhere. LAWS is committed to enhancing gender equity in sport, recreation and PA through awareness, education, and support in the creation of equitable opportunities for girls. The main objectives of LAWS are to inspire girls to embrace a physically healthy lifestyle, foster confidence in women so that they may lead others and build opportunities to educate the community about gender equity issues. LAWS offers many different programs and subdivisions that help facilitate the benefits of an active lifestyle and the barriers to equal access to sport.

Girls Organizing and Learning Sports (GOALS)

GOALS is one of the subdivisions of LAWS that focuses on improving leadership and PA levels in adolescents and children. It is a girl-centric after-school/evening sport program that is offered in Windsor-Essex County. GOALS provides opportunities for all girls (inclusive of transgender girls) aged 5-14 years to learn fundamental athletic skills through structured games and activities that enhance their physical, social, emotional, and leadership skills. Instructors oversee creating, promoting, delivering, and leading a wide

range of enjoyable PA opportunities. Some of these activities include, but are not limited to, Zumba, obstacle courses, volleyball, and yoga. For almost two decades, GOALS has provided a supportive environment for girls to pursue PA by offering two to three, six-week instructional sessions per year. Over the years, GOALS volunteers have witnessed growing confidence and enhanced self-esteem in many of the participating girls. GOALS provides young girls invaluable opportunities to improve their confidence, self-efficacy, resilience, leadership skills, and their mental and physical health. It is the program's objective that these positive traits and skills will carry forward into personal, academic, and professional contexts in the girls' futures. Many times, instructors have found that the older girls have ended up helping their younger peers, which further enhances and develops leadership skills in addition to sport-related skills. Not only does the GOALS program increase the overall well-being and health of young girls, but it also has been shown to develop the leadership skills and self-confidence necessary to succeed in personal and professional realms of life.

Despite the success of the GOALS program over the years (i.e., continues to be implemented after over a decade), GOALS has struggled to expand its reach and impact across more than one or two program sites each year. Moreover, there have been several barriers to its continuation and successful delivery. For example, two of the major barriers, faced nearly each year, has been to find appropriate leaders (e.g., have knowledge of the sport/activity, are good role models), as well as, finding adequate and cost-effective spaces to successfully deliver the program. As such, Dr. Woodruff (Department of Kinesiology) and Dr. Pollard (Faculty of Education) recently received a Social Sciences and Humanity Research Grant to update the GOALS program to become

systemic, consistent, structured, and sustainable; with the goal of being able to share the GOALS program with other communities and organizations outside of Windsor-Essex County.

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Appendices

Appendix A

Pre-Program Survey for Girls Participating in GOALS

GOALS PROGRAM

PRE-TEST QUESTIONNAIRE

What day of the month were you born?
Ex: If your birthday is March 6 0 6

What are the last 2 letters of your first name?
Ex: If your first name is Mary R Y

Question	*Response*
How old are you?	_____ YEARS OLD
What grade are you in?	_____

Do you currently participate in any school sports?

☐ YES ☐ NO

Please describe: _____

Do you currently participate in any community based/club sports?

☐ YES ☐ NO

Please describe: _____

Do you currently participate in any regular physical activity that is not considered a sport? Ex: yoga, jogging, weight-training, skipping.

☐ YES ☐ NO...WHY?

- ☐ *Cost*
- ☐ *Transportation*
- ☐ *Time*
- ☐ *Availability*
- ☐ *I do not like physical activity*

University of Windsor
Faculty of Human Kinetics

LEADERSHIP ADVANCEMENT FOR WOMEN AND SPORT

University of Windsor
Faculty of Education

THIS SURVEY MAY BE USED FOR RESEARCH PURPOSES.

ARE YOU GOOD AT SPORTS?

☐ TRUE ☐ sort of true ☐ *sort of false* ☐ FALSE

DO YOU HAVE CONFIDENCE WHEN PLAYING A NEW SPORT FOR THE FIRST TIME?

☐ TRUE ☐ sort of true ☐ *sort of false* ☐ FALSE

ARE YOU OFTEN CHOSEN FOR THE SPORTS TEAM?

☐ TRUE ☐ sort of true ☐ *sort of false* ☐ FALSE

DO YOU PREFER WATCHING RATHER THAN PARTICIPATING IN SPORTS?

☐ TRUE ☐ sort of true ☐ *sort of false* ☐ FALSE

ARE YOU OFTEN INTERESTED IN TRYING NEW SPORTS?

☐ TRUE ☐ sort of true ☐ *sort of false* ☐ FALSE

DO YOU DISLIKE PHYSICAL EDUCATION/GYM CLASSES?

☐ TRUE ☐ sort of true ☐ *sort of false* ☐ FALSE

ARE YOU POOR AT SPORTS?

☐ TRUE ☐ sort of true ☐ *sort of false* ☐ FALSE

DO YOU FEEL THAT YOU WILL LOSE TO YOUR FRIENDS AT SPORTS?

☐ TRUE ☐ sort of true ☐ *sort of false* ☐ FALSE

IN YOUR CLASS, ARE YOU AMONG THE BEST AT SPORTS?

☐ TRUE ☐ sort of true ☐ *sort of false* ☐ FALSE

DO YOU PREFER NOT TO BE SEEN BY OTHERS WHEN YOU PARTICIPATE IN SPORTS?

☐ TRUE ☐ sort of true ☐ *sort of false* ☐ FALSE

DO YOU HAVE SELF-CONFIDENCE?

☐ TRUE ☐ sort of true ☐ *sort of false* ☐ FALSE

IN GENERAL, DO YOU THINK THAT YOU CAN DO THINGS BETTER THAN OTHER PEOPLE?

☐ TRUE ☐ sort of true ☐ *sort of false* ☐ FALSE

DO YOU THINK THAT YOU HAVE A LOT OF THINGS TO BE PROUD OF?

☐ TRUE ☐ sort of true ☐ *sort of false* ☐ FALSE

DO YOU THINK THAT WHATEVER YOU DO DOES NOT GO WELL?

☐ TRUE ☐ sort of true ☐ *sort of false* ☐ FALSE

ARE YOU SATISFIED WITH THE WAY YOU ARE NOW?

☐ TRUE ☐ sort of true ☐ *sort of false* ☐ FALSE

DO YOU THINK THAT YOU WILL BECOME A GREAT PERSON?

☐ TRUE ☐ sort of true ☐ *sort of false* ☐ FALSE

DO YOU THINK THAT YOU ARE NOT A USEFUL PERSON?

☐ TRUE ☐ sort of true ☐ *sort of false* ☐ FALSE

DO YOU HAVE CONFIDENCE IN YOUR OWN OPINIONS?

☐ TRUE ☐ sort of true ☐ *sort of false* ☐ FALSE

DO YOU FEEL THAT YOU HAVE A FEW GOOD POINTS?

☐ TRUE ☐ sort of true ☐ *sort of false* ☐ FALSE

ARE YOU ALWAYS WORRIED ABOUT WHETHER OR NOT YOU FAIL?

☐ TRUE ☐ sort of true ☐ *sort of false* ☐ FALSE

YOU DO THE RIGHT THING WITHOUT BEING ASKED.

- ☐ NEVER OR RARELY
- ☐ SOMETIMES
- ☐ REGULARLY
- ☐ MOST OF THE TIME
- ☐ ALWAYS
- ☐ UNSURE

YOU SET GOALS AND PLAN AHEAD.

- ☐ NEVER OR RARELY
- ☐ SOMETIMES
- ☐ REGULARLY
- ☐ MOST OF THE TIME
- ☐ ALWAYS
- ☐ UNSURE

YOU DO YOUR HOMEWORK BEFORE YOU PLAY.

- ☐ NEVER OR RARELY
- ☐ SOMETIMES
- ☐ REGULARLY
- ☐ MOST OF THE TIME
- ☐ ALWAYS
- ☐ UNSURE

YOU TRY TO FIND SOLUTIONS WHEN OTHERS DON'T AGREE WITH YOU.

- ☐ NEVER OR RARELY
- ☐ SOMETIMES
- ☐ REGULARLY
- ☐ MOST OF THE TIME
- ☐ ALWAYS
- ☐ UNSURE

YOU LISTEN WHEN OTHERS ARE TALKING TO YOU.

- ☐ NEVER OR RARELY
- ☐ SOMETIMES
- ☐ REGULARLY
- ☐ MOST OF THE TIME
- ☐ ALWAYS
- ☐ UNSURE

YOU WORK WELL IN GROUPS.

- ☐ NEVER OR RARELY
- ☐ SOMETIMES
- ☐ REGULARLY
- ☐ MOST OF THE TIME
- ☐ ALWAYS
- ☐ UNSURE

YOU TAKE CARE OF YOUR HEALTH BY CHOOSING HEALTHY SNACKS.

☐ NEVER OR RARELY ☐ SOMETIMES ☐ REGULARLY ☐ MOST OF THE TIME ☐ ALWAYS ☐ UNSURE

YOU TAKE CARE OF YOUR HEALTH BY EXERCISING.

☐ NEVER OR RARELY ☐ SOMETIMES ☐ REGULARLY ☐ MOST OF THE TIME ☐ ALWAYS ☐ UNSURE

YOU TAKE CARE OF YOUR HEALTH BY GETTING ENOUGH SLEEP.

☐ NEVER OR RARELY ☐ SOMETIMES ☐ REGULARLY ☐ MOST OF THE TIME ☐ ALWAYS ☐ UNSURE

THANK YOU!!!

Appendix B

Post-Program Survey for Girls Participating in GOALS

GOALS PROGRAM

POST-TEST QUESTIONNAIRE

What day of the month were you born?
Ex: If your birthday is March 6 0 6

What are the last 2 letters of your first name?
Ex: If your first name is Mary R Y

Question *Response*

How old are you? _____ YEARS OLD

What grade are you in? _____

What is the name of your school? _____

Would you consider yourself?

- ☐ *White (Ex. Canadian, English, French, Italian, Polish)*
- ☐ *Aboriginal (Ex. First Nations, Metis, Inuit)*
- ☐ *Black (Ex. African-Canadian, African-American, African, Nigerian)*
- ☐ *Chinese, Korean, Japanese*
- ☐ *Arabic (Ex. Lebanese, Jordan, Palestinian, Egyptian, Iraqi, Syrian)*
- ☐ *South Asian (Ex. Irani, Indian, Pakistani, Sri Lankan, Nepali)*
- ☐ *I don't know*
- ☐ *Other, please specify* _____

Do you currently participate in any school sports?

☐ YES ☐ NO

Please describe: _____

Do you currently participate in any community based/club sports?

☐ YES ☐ NO

Please describe: _____

Do you currently participate in any regular physical activity that is not considered a sport? Ex: yoga, jogging, weight-training, skipping.

☐ YES ☐ NO...WHY?

- ☐ *Cost*
- ☐ *Transportation*
- ☐ *Time*
- ☐ *Availability*
- ☐ *I do not like physical activity*

University of Windsor Faculty of Human Kinetics

University of Windsor Faculty of Education

THIS SURVEY MAY BE USED FOR RESEARCH PURPOSES.

ARE YOU GOOD AT SPORTS?

☐ TRUE ☐ sort of true ☐ *sort of false* ☐ FALSE

DO YOU HAVE CONFIDENCE WHEN PLAYING A NEW SPORT FOR THE FIRST TIME?

☐ TRUE ☐ sort of true ☐ *sort of false* ☐ FALSE

ARE YOU OFTEN CHOSEN FOR THE SPORTS TEAM?

☐ TRUE ☐ sort of true ☐ *sort of false* ☐ FALSE

DO YOU PREFER WATCHING RATHER THAN PARTICIPATING IN SPORTS?

☐ TRUE ☐ sort of true ☐ *sort of false* ☐ FALSE

ARE YOU OFTEN INTERESTED IN TRYING NEW SPORTS?

☐ TRUE ☐ sort of true ☐ *sort of false* ☐ FALSE

DO YOU DISLIKE PHYSICAL EDUCATION/GYM CLASSES?

☐ TRUE ☐ sort of true ☐ *sort of false* ☐ FALSE

ARE YOU POOR AT SPORTS?

☐ TRUE ☐ sort of true ☐ *sort of false* ☐ FALSE

DO YOU FEEL THAT YOU WILL LOSE TO YOUR FRIENDS AT SPORTS?

☐ TRUE ☐ sort of true ☐ *sort of false* ☐ FALSE

IN YOUR CLASS, ARE YOU AMONG THE BEST AT SPORTS?

☐ TRUE ☐ sort of true ☐ *sort of false* ☐ FALSE

DO YOU PREFER NOT TO BE SEEN BY OTHERS WHEN YOU PARTICIPATE IN SPORTS?

☐ TRUE ☐ sort of true ☐ *sort of false* ☐ FALSE

DO YOU HAVE SELF-CONFIDENCE?

☐ TRUE ☐ sort of true ☐ *sort of false* ☐ FALSE

IN GENERAL, DO YOU THINK THAT YOU CAN DO THINGS BETTER THAN OTHER PEOPLE?

☐ TRUE ☐ sort of true ☐ *sort of false* ☐ FALSE

DO YOU THINK THAT YOU HAVE A LOT OF THINGS TO BE PROUD OF?

☐ TRUE ☐ sort of true ☐ *sort of false* ☐ FALSE

DO YOU THINK THAT WHATEVER YOU DO DOES NOT GO WELL?

☐ TRUE ☐ sort of true ☐ *sort of false* ☐ FALSE

ARE YOU SATISFIED WITH THE WAY YOU ARE NOW?

☐ TRUE ☐ sort of true ☐ *sort of false* ☐ FALSE

DO YOU THINK THAT YOU WILL BECOME A GREAT PERSON?

☐ TRUE ☐ sort of true ☐ *sort of false* ☐ FALSE

DO YOU THINK THAT YOU ARE NOT A USEFUL PERSON?

☐ TRUE ☐ sort of true ☐ *sort of false* ☐ FALSE

DO YOU HAVE CONFIDENCE IN YOUR OWN OPINIONS?

☐ TRUE ☐ sort of true ☐ *sort of false* ☐ FALSE

DO YOU FEEL THAT YOU HAVE A FEW GOOD POINTS?

☐ TRUE ☐ sort of true ☐ *sort of false* ☐ FALSE

ARE YOU ALWAYS WORRIED ABOUT WHETHER OR NOT YOU FAIL?

☐ TRUE ☐ sort of true ☐ *sort of false* ☐ FALSE

YOU DO THE RIGHT THING WITHOUT BEING ASKED.

- ☐ NEVER OR RARELY
- ☐ SOMETIMES
- ☐ REGULARLY
- ☐ MOST OF THE TIME
- ☐ ALWAYS
- ☐ UNSURE

YOU SET GOALS AND PLAN AHEAD.

- ☐ NEVER OR RARELY
- ☐ SOMETIMES
- ☐ REGULARLY
- ☐ MOST OF THE TIME
- ☐ ALWAYS
- ☐ UNSURE

YOU DO YOUR HOMEWORK BEFORE YOU PLAY.

- ☐ NEVER OR RARELY
- ☐ SOMETIMES
- ☐ REGULARLY
- ☐ MOST OF THE TIME
- ☐ ALWAYS
- ☐ UNSURE

YOU TRY TO FIND SOLUTIONS WHEN OTHERS DON'T AGREE WITH YOU.

- ☐ NEVER OR RARELY
- ☐ SOMETIMES
- ☐ REGULARLY
- ☐ MOST OF THE TIME
- ☐ ALWAYS
- ☐ UNSURE

YOU LISTEN WHEN OTHERS ARE TALKING TO YOU.

- ☐ NEVER OR RARELY
- ☐ SOMETIMES
- ☐ REGULARLY
- ☐ MOST OF THE TIME
- ☐ ALWAYS
- ☐ UNSURE

YOU WORK WELL IN GROUPS.

- ☐ NEVER OR RARELY
- ☐ SOMETIMES
- ☐ REGULARLY
- ☐ MOST OF THE TIME
- ☐ ALWAYS
- ☐ UNSURE

YOU TAKE CARE OF YOUR HEALTH BY CHOOSING HEALTHY SNACKS.

☐ NEVER OR RARELY ☐ SOMETIMES ☐ REGULARLY ☐ MOST OF THE TIME ☐ ALWAYS ☐ UNSURE

YOU TAKE CARE OF YOUR HEALTH BY EXERCISING.

☐ NEVER OR RARELY ☐ SOMETIMES ☐ REGULARLY ☐ MOST OF THE TIME ☐ ALWAYS ☐ UNSURE

YOU TAKE CARE OF YOUR HEALTH BY GETTING ENOUGH SLEEP.

☐ NEVER OR RARELY ☐ SOMETIMES ☐ REGULARLY ☐ MOST OF THE TIME ☐ ALWAYS ☐ UNSURE

AS PART OF ATTENDING THE GOALS PROGRAM, DID YOU CHANGE ANY OF YOUR PHYSICAL ACTIVITY BEHAVIOURS?

☐ YES ...PLEASE DESCRIBE.

☐ NO ...WHY NOT?

AS PART OF ATTENDING THE GOALS PROGRAM, DID YOU LEAD ANY PHYSICAL ACTIVITIES THAT WILL HELP OTHERS CHANGE THEIR PHYSICAL ACTIVITY BEHAVIOURS?

☐ YES ...PLEASE DESCRIBE.

☐ NO ...WHY NOT?

AS PART OF ATTENDING THE GOALS PROGRAM, WILL YOU TRY OUT FOR A SCHOOL OR COMMUNITY SPORTS/PHYSICAL ACTIVTY TEAM?

☐ YES ...PLEASE DESCRIBE.

☐ NO ...WHY NOT?

WHAT WAS YOUR FAVOURITE PART OF THE GOALS PROGRAM?

THANK YOU

Vita Auctoris

NAME:	Bailey Csabai
PLACE OF BIRTH:	Windsor, Ontario
YEAR OF BIRTH:	1998
EDUCATION:	Holy Names High School, Windsor, Ontario, 2012-2016
	University of Windsor, BHK., Windsor, Ontario, 2016-2021
	University of Windsor, MHK., Windsor, Ontario, 2021-2023