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**FEEL THE POWER FEEL FIT GIRLS PROGRAM:  
A FORMATIVE EVALUATION**

By:

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A Thesis Submitted to the Faculty of Graduate Studies and Research  
in Partial Fulfillment of the Requirements for  
the Master of Public Health Degree at Lakehead University

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## Abstract

This research study set out to formatively evaluate a physical activity program directed at female adolescents. The program, Feel the Power Feel Fit Girls (FTPFFG) is run by Hamilton Public Health Services and funded by Healthy Living Hamilton. Its aim is to provide accessible physical activity opportunities to adolescent females in their schools with the hopes of educating them about the importance of physical activity, reducing physical activity barriers, increasing their physical activity self-efficacy, and ultimately increasing their physical activity levels.

Qualitative information was collected via focus groups and key informant interviews from teachers, Youth Advisors, female participants, Public Health Nurses, and principals who participated in the program. Quantitative data, in the form of a questionnaire, was given to a select number of female secondary students in each grade who did not participate in the program to determine reasons for their lack of involvement and what might encourage them to join in.

Four main themes surfaced from the interviews and focus groups: the overall culture of the school, including the physical activity culture, successes of the program, challenges, and areas for improvement. The results shed some light in terms of what is working well, and where improvements can be made to make the program more effective.

While both schools provided some similar information in terms of successes and challenges, both schools were unique in their school culture. Therefore, the program will need to be adapted to meet the needs at each individual school in order to be successful. Each school had varying levels of support as well. In order for the program to thrive, teachers, students and the PHN involved in the program, need to believe in the program as well as have the time to commit to it. The results of this study will be helpful to make the FTPFFG program more effective. They will also be useful to other program planners interested in creating a physical activity program aimed at adolescent females.

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## CHAPTER I - INTRODUCTION

### Background

Despite vast amounts of knowledge regarding the importance and benefits of physical activity, many children and youth are still not active enough to achieve health benefits. Nationally and provincially, only 26% of Canadians and likewise 26% of Ontarians aged 12 and over are considered physically active based on self-reported data (Canadian Community Health Survey, 2003). Recent objective data using accelerometers show that 91% of Canadian children and youth do not receive enough physical activity to achieve the recommendations set out by Canada's Physical Activity Guides for Children and for Youth (CFLRI, 2005/06). While both male and female children are at risk, it has been shown that girls are less active than their male counterparts (Constantinos, Loucaides, Plotnikoff, & Bercovitz, 2007) and that physical activity levels amongst girls decrease with increasing age (Stone, McKenzie, Welk, & Booth, 1998).

Feel the Power Feel Fit Girls (FTPFFG) is a program that was developed by Hamilton Public Health Services (HPHS) in 2004. The program is a partnership between HPHS and secondary schools in the Hamilton area. The program brings public health facilitators (Physical Activity Specialists and Public Health Nurses) into the school to work with volunteer female staff and students to provide education about importance of physical activity, and to identify physical activity barriers female adolescents face at their school. They then brainstorm ways to break down these barriers, and put together accessible physical activity opportunities for females in that school. Physical activities offered are all-inclusive and often non-competitive in order to help reduce these barriers and to increase self-efficacy. The idea is that female students who attend the school pick activities for the launch and ongoing program. Often the program is a once-a-week girls-only hour at lunch or after school. Programs range from weight room instruction, various types of dance (belly dance, hip hop, salsa, etc.) to Pilates and yoga. The program is most often started with a kick-off event or launch with different physical activities for participants to try to give female students exposure to the program.

## Evaluation Rationale

Program evaluation is, “the use of social research methods to systematically investigate the effectiveness of social intervention programs”. Gathering, analyzing, and interpreting evidence about the performance of a program is useful for improving programs and informing social action aimed at reducing problems in society. (Rossi, Lipsey, & Freeman, 2004, pg. 28)

Feel the Power Feel Fit Girls is an established program based on research showing a need for a physical activity programming targeting female adolescents (program need and the formation of the program is discussed below). A formative evaluation of the program was planned. This type of evaluation can provide information guiding program improvement, and can help shape an established program to perform better. (Rossi, Lipsey, & Freeman, 2004). The purpose of the FTPFFG formative evaluation was to determine how the program was implemented, as well as program successes and challenges. It will help to identify opportunities for improvement and to assess if students and teachers who participated in the program found the program valuable. The findings of the formative evaluation will help to inform how the program can be improved upon in the future. Once program improvements are made, an outcome evaluation of the program can be conducted to determine if the program is producing the desired outcomes (i.e. reductions in physical activity barriers, an increase in self-efficacy towards physical activity, and an increase in physical activity levels of adolescent females).

## Evaluation Objectives

The following evaluation objectives were met through key informant interviews, focus groups, non-participant questionnaires, use of FTPFFG session minutes, and launch and program attendance logs:

1. Determine the extent to which the program was implemented as planned (i.e., consistent with the “logic” of the program, including self-efficacy theory).
2. Describe how the program was promoted.
3. Describe how schools, teachers, and Youth Advisors were recruited, and the strategies used to maintain their involvement.
4. Determine the quality and quantity of training provided to teachers and Youth Advisors.
5. Describe the culture of the school environment as well as school characteristics (i.e., demographics of the school, including staff and students).
6. Describe the partnership between Public Health Services staff, teachers, and Youth Advisors.
7. Describe how much time teachers and Youth Advisors spent on specific program activities.
8. Determine the number of students who participated in specific program events.
9. Describe why some students did not participate in the program and what would make them more likely to participate in the future.
10. Describe how the program activities were tailored to address specific preferences of program participants.
11. Describe program participants’ views on their mastery experiences (e.g., successes during the activities), their observations of successful performances of their peers, and how others provided them with positive feedback.
12. Describe the materials/resources used, content covered, and duration of activities during program events.
13. Describe program participants’ reaction (e.g., satisfaction) toward specific activities.
14. Identify factors that facilitated or made it difficult for various stakeholders to implement the program, and to describe strategies used to overcome any challenges.
15. Obtain suggestions from various stakeholders on how to improve the program.

## Limitations of the Study

Two secondary schools were selected to be involved in the study. Therefore, a relatively small sample size was utilized. However, by using qualitative methods (key informant interviews and focus groups), richer data could be derived from the participants. Also, measures to include females from all grades in the focus groups helped to be more representative of the school population.

Small sample sizes were used in the collection of quantitative data from the questionnaire. Caution should be utilized when interpreting these results.

Obtaining participants for student focus groups was challenging as the researcher relied on students to bring back signed consent forms in order to participate in the program. Several attempts at reminding students to provide these documents were made.

It was difficult obtaining all participants in the focus groups, especially in school B. This affected the size of some of the focus groups. In the case of the school B Youth Advisor session, the meeting date of the focus group had to be rescheduled due to low participant turnout.

Having a vice principal present in the school A teacher focus group could have biased the results. Data provided by other focus groups at that school (Youth Advisors and program participants) helped to ensure that the findings were consistent.

A second reader was not utilized during the reading of the transcripts and the creation of the master list of codes. All transcripts were read first to create a master list of codes. Transcripts were then reread a second time to apply the codes to sections of the data.

## CHAPTER II - REVIEW OF LITERATURE

Physical activity has many health benefits for both body and mind. Physical activity helps to prevent chronic disease such as heart disease (Lee & Paffenbarger Jr., 2001), type II diabetes, stroke, overweight and obesity, as well as certain types of cancer, (Baumann, 2004). Emotionally, physical activity can help to alleviate feelings of anxiety and depression while increasing self-confidence and feelings of self-worth, (Carswell, 2005). It has also been shown that individuals who are physically active on a regular basis tend to have higher concentration levels and perform better academically (Keays & Allison, 1995). While the benefits of physical activity are widely noted, there is a wealth of information that shows that children and youth do not participate in sufficient amounts of physical activity to achieve health benefits.

Physical activity levels for most youth are not high enough for optimal health and wellness. Nationally and provincially, only 26% of Canadians and likewise 26% of Ontarians aged 12 and over are considered physically active. These data are very similar to findings on a local level. According to the Canadian Community Health Survey (2003), only 29.3% of Hamiltonians aged 12 and older (34.7% of males and 24.0% of females) are considered physically active, based on their responses to questions regarding the frequency, duration, and intensity of the leisure-time physical activities they participated in over the previous three months. These data showing females being less active than males is consistent with other research findings. Nelson, Neumark-Stzainer, Hannan, Sirard, and Story (2006) conducted a longitudinal study looking at physical activity trends in adolescents (from junior high school to post high school). Based on self-reported weekly hours of moderate to vigorous physical activity, they found substantial longitudinal changes in moderate to vigorous physical activity, especially among girls. Girls' physical activity levels decreased from 5.9 to 4.9 hours per week in early to mid adolescence to 5.1 to 3.5 hours per week from mid to late adolescence. Caution must be used when looking at self-reported data, as participants, especially children, tend to overestimate physical activity levels. It is for this reason that objective measures are needed (Sallis & Saelens, 2000). One objective study using accelerometers showed 91% of Canadian children and youth not physically active enough to achieve the recommendations set out in Canada's Physical Activity Guides for Children and Youth. Canada's Physical Activity guidelines for children and youth recommend 90 minutes a day of moderate to vigorous physical activity. It should be noted, however, that there are some inconsistencies with this

recommendation. Current physical activity guidelines for adolescents are less clear than those recommended for adults (Twisk, 2001). One systematic review conducted by Strong, Malina, Blimkie, Daniels, Dishman, Gutin, Hergenroeder, Must, Nixon, Pivarnik, Rowland, Trost, and Trudeau (2005) aimed to develop evidence-based recommendations for physical activity in youth. Their search led them to the conclusion that school-age youth should participate daily in 60 minutes or more of moderate to vigorous physical activity.

Physical inactivity not only affects our physical and emotional health, but also has an impact on our economy. Physical inactivity costs Canada's health care system roughly \$2.1 billion annually in direct health care costs (Katzmarzyk, Gledhill, & Shephard, 2000), with an estimated annual economic burden of \$5.3 billion for both direct and indirect costs.

As noted above, girls are less active than their male counterparts at the same age and physical activity levels amongst girls decrease through adolescence and into adulthood (Nelson, Neumark-Stzainer, Hannan, Sirard, & Story, 2006 and Stone, McKenzie, Welk, & Booth, 1998). We need to know why females' physical activity changes during adolescence (Pate, Dowda, O'Neill, & Ward, 2007). What we do know is that youths' experiences, such as physical activity, can be linked to their health status later in life, meaning that being physically active positively affects their long-term health (Hedberg, Bracken, & Stashwick, 1999). Low participation rates in physical activities, particularly among adolescent females could set the standard for reduced activity patterns later in adulthood (Booth, McClelland, Phongsacan, Okley, Patterson, Wright, Bauman, & Baur, 1997). Effective programs to promote physical activity are therefore greatly needed among young females.

### **Gender Differences in Physical Activity**

One study of Icelandic children and adolescents in grades six through ten found gender differences when it comes to preferences for physical activity (Vilhjalmsson & Kristjansdottir, 2003). An increasingly large portion of leisure-time physical activity for children and youth takes place within organized sport. Based on survey results of 3,270 children and youth, it was found that not only are girls less physically active, and increasingly so as they moved up in grades, they are also less likely to be associated with a sports club. Those females who are involved in organized sport are more likely to withdraw than males. The gender difference in organized sports involvement is much greater than the overall gender difference in physical



activity. Coakley (1998) proposes that the culture of organized sport is more geared to males than to females. This could account for these differences. Pate, Dowda, O'Neill, and Ward (2007) found that between the eighth to 12<sup>th</sup> grades, females decreased in team sport participation. They also found that the probability of girls participating in certain forms of vigorous physical activity (such as team sports) in grade 12 is more likely to happen if those activities were performed in grade eight. This demonstrates another case for the importance of forming physical activity habits early in life.

It is important to note that while levels of physical activity are less for female adolescents than males, males' physical activity levels also decrease with age. It is therefore important that intervention programs for males be explored. However, this is beyond the scope of this study. Allison, Dwyer, Goldenberg, Fein, Yoshida, and Boutilier (2005) stated that students participated in physical activity because it was enjoyable, challenging, and involved skill development (intrinsic reasons). Extrinsic reasons were reported more than intrinsic ones and included socializing with peers, physical and psychological health benefits. Barriers to physical activity included physical attributes such as being too young or too short for the activity, lack of comfort with how they look, not having the skills to participate; psychological barriers such as laziness, lack of confidence, fear of failure; and screen time. They suggested more physical activities oriented towards youth, a more supportive physical activity environment, better quality equipment, and lower fees.

Females were also shown to value sports achievement less. Boys outnumber girls in competitive, team, and high intensity sports. Conversely, girls outnumber boys in non-competitive, individual and medium to low intensity activities such as dance, walking, aerobics, and swimming; (Sallis, 1996) and they tend to do physical activity more for physical appearance, health, and fitness related reasons as opposed to boys who do it more for competition (Koivula, 1999). Even amongst girls there are a number of variables that can help to predict their level of activity. Biddle, Whitehead, O'Donovan, and Nevill (2005) identified barriers to physical activity for female adolescents. These barriers were broken down into five categories including demographic and biological, psychological, behavioural, social and cultural, and physical environmental barriers that prevented adolescent females from participating in physical activity. Thomas (2006) states that it may be necessary to have different programs geared to males and females.

The Health Belief Model states that perceived barriers decrease the likelihood of engaging in preventive health practices, such as physical activity, especially if they outweigh the perceived benefits. These barriers can be external, such as lack of support from family or friends, or internal such as being embarrassed to participate in physical activity in front of others (Dwyer, Allison, & Makin, 1998). Allison, Dwyer, & Makin (1999) randomly distributed questionnaires to 1,041 grade nine and 11 high school students in a metropolitan Toronto school board district. Grades nine and 11 were used for comparison purposes. Lack of time due to homework, other interests, and family activities were among the top four perceived barriers to physical activity. It was shown that females have consistently higher levels of perceived barriers than males. This could affect their decision to participate in physical activity. However, self-efficacy, the belief that you have the skills and confidence needed to perform the activity, despite barriers, may be a more accurate predictor of physical activity participation amongst females.

Several articles on the importance of self-efficacy in relation to physical activity have been researched. Self-efficacy is thought to be positively associated with physical activity participation. Self-efficacy has been found to increase during childhood and young adulthood and is generally higher amongst males. (Gecas, 1989) Looking at the result of 1,041 surveys and a 20-item scale of self-efficacy in relation to overcoming barriers to vigorous physical activity from grade nine and 11 high school students in the Toronto area, Allison, Dwyer, & Makin (1999) noted that external barriers (lack of time, cost) negatively affected self-efficacy.

### **Past and Current Physical Activity Interventions**

Many physical activity interventions for children and youth have been designed and implemented with the hope of increasing physical activity levels. Evaluation of these programs helps to determine their effectiveness. Stone, McKenzie, Welk, and Booth (1998) looked at physical activity intervention studies from 1980 to 1997 in school and community environments. Their search was limited to those studies that had a quantitative assessment component, used a comparison or control group, and whose participants were between preschool to college age. Twenty-two studies met the criteria. Most programs were aimed at the elementary school level and included grades three, four, five, and six. Those few programs offered at the high school level mostly focused on grades nine and ten. They concluded that improvements in knowledge and attitude related to physical activity were often found in those studies that measured them.

They noted few positive findings reported on measures assessing out-of-school physical activity. However, the two out-of-school programs aimed at adolescent females reported significant results. Several recommendations were made surrounding the interventions reviewed, including the need for more studies on the effectiveness of interventions to prevent decline of physical activity in adolescents, and females in particular.

A more recent review looked at obesity prevention interventions over a span of 11 years in the school and community setting (Bautista-Castaño, Doreste, & Serra-Majem, 2004). Interventions included increased physical activity, nutritional education, behavioural modification, and parent participation, all with the intent to prevent excessive weight gain in children between the ages of zero to 18. An extensive review was conducted finding 14 interventions aimed at prevention of childhood obesity, 12 of which were in the school environment. Based on their comparison, they concluded that programs lasting six months to one-year are more effective than shorter intervention programs in terms of sustainability. Also, combining physical activity and nutrition programming is more effective, especially in combination with behaviour modification. Parent involvement was found to be very helpful. When education around decreasing sedentary behaviours, such as screen viewing, was included, this increased the effectiveness of the intervention. The interventions had a beneficial effect on children's health by improving habits and increasing the awareness of the importance of healthy eating and physical activity. The benefits of including screen viewing education was validated by a systematic review conducted by Campbell, Waters, O'Meara, and Summerbell (2005) who stated that strategies that encourage reduction in sedentary behaviours as well as increasing physical activity may prove to be more successful.

New Moves, one of the interventions reviewed by Bautista-Castaño et al., is a 16-week high school obesity intervention program for adolescent girls (Neumark-Sztainer, 2003). It provides an alternative physical education class (during class time) five times per week for overweight girls or girls at risk for being overweight due to low levels of physical activity. Being involved and completing the program yields a physical education credit. As well as school support, it also encourages parental involvement through information post cards mailed home every two to three weeks during the intervention. The program offers a wide range of activities such as aerobics, kickboxing, yoga, and dance led by local guest instructors. Physical

activity opportunities in the community such as snowshoeing on local trails and field trips to facilities such as the YMCA/YWCA are also integrated into the program.

Perceived strengths of the program described in interviews from both principals and teachers were the all-girl classes, guest physical activity instructors, field trips, integration of nutrition and social support, manuals and training logs, as well as various other incentives. Parent surveys showed that most parents were satisfied with the program and all felt that it should continue at the school. In the process evaluation surveys, the participants stated that they enjoyed the various physical activities and guest instructors. From the focus groups, it was shown that physical activity patterns and self-image were improved.

Since the program was part of the school curriculum and held during class time, it avoided problems surrounding transportation home and conflicts with after-school responsibilities. The length and frequency of the program proved to be effective as the program was sustained a year later in all three of the intervention sites. However, as the program was aimed at overweight and at-risk overweight females, the program was not inclusive to all females. It is possible that harassment issues could emerge with a class such as this, even though measures were taken to avoid it. As well, there may be benefits to providing a more female inclusive environment for various levels of ability. A program such as this may prove to be mutually beneficial to all participants. Body Mass Index (BMI) was used in assessing the effectiveness of this program. The authors noted that the participants' BMI did not change and perhaps these measures are not adequate in assessing the beginning stages of physical activity change.

To reduce gaps that exist in the promotion of physical activity among female high school adolescents, Project FAB was created (Jamner Schneider, Spruijt-Metz, Bassin, & Cooper, 2004). The FAB program is a school-based physical activity intervention program directed at sedentary, unfit adolescent females. Two public schools in California with similar demographics were involved in the study (one intervention school, one control). Like New Moves, the program was offered as an alternative physical education course for credit to female students in grades ten and 11. Baseline and post-intervention data were collected at a nearby clinical research centre. The group met five days per week for 60 minutes. Forty minutes of this time was spent being active. Activities were determined from focus groups with the target population and included aerobic dance, swimming, basketball, and Tae Bo. One day a week was used to provide

information to the female students on the importance of physical activity and strategies to increase it. BMI and  $VO_2$  max measurements were taken. No BMI difference was found post intervention. When compared with the control school, increased physical activity levels and cardiovascular fitness were found to occur in the intervention group. Due to being open only to specific grades, as with New Moves, the program was not inclusive of all girls. As well, those potential participants considered 'too fit' or 'not sedentary' were turned away from the program. Therefore, no information regarding the benefit of offering an all-girl program to girls of various physical activity levels can be ascertained.

An Australian study (Salmon, Ball, Crawford, Booth, Telford, Hume, Jolley, & Worsley, 2005) called Switch-Play aimed to achieve healthy weight maintenance of ten year olds. This was attempted through developing and testing three different approaches: reducing sedentary activities, increasing physical activity skills and enjoyment, or using a combination of these two methods. These approaches were then compared to a control group. A process evaluation of the program was conducted to determine program delivery and participant engagement in the intervention, as well as how participants received the program. Assessments were conducted both at baseline and post-intervention. Follow-up data were collected six to twelve months post-intervention. Children in grade five across four schools in low socioeconomic neighborhoods in Melbourne, Australia participated ( $n=397$ ). The program was designed for incorporation into school curriculum. After implementation, feedback was obtained from intervention teachers regarding student enjoyment, quality of the lessons, and parent awareness of the program. Their evaluation found that the intervention programs were effectively delivered, and were enjoyed by participants. They noted the importance of creating a program that is practical and feasible in terms of delivery and cost such that it does not require expensive equipment or training. Support from administration, teachers and parents is essential. Many external factors need to be considered when creating an intervention, and programs need to be geared to 'real world' situations in order to be successful.

Another multi-site study, Pathways, utilized 21 intervention schools to promote healthy eating and physical activity in American Indian children in grades three, four and five (Steckler, Ethelbah, Martin, Stewart, Pardilla, Gittelsohn, Stone, Fenn, Smyth, & Vu, 2003). The program spanned three years, after which a large process evaluation of the program was conducted. The Pathways program was evaluated on school staff training, implementation of the physical

activity program and food guidelines, and the students' perceptions of the program. Adult participation (parents and guardians) was also evaluated, being another component of the program. The results showed that the program implementation was successful, and this was likely due to the creation of culturally sensitive, age-appropriate lessons. Both of these qualities need to be taken into consideration when creating a female adolescent physical activity intervention program.

Rather than focusing on specific grade interventions, van Beurden, Barnett, Zask, Dietrich, Brooks, and Beard (2003) created the Move it Groove it intervention program with a whole school approach. One of the initiating factors that brought the program forward was the evident gap between physical activity currently offered to children and youth in terms of frequency and physical activity opportunities, and what is recommended. The challenge was to improve foundation movement skills and increase levels of physical activity during the short time span of a physical education class. The program was a one-year intervention with nine control and nine intervention schools. A variety of skill measurements were taken by a trained tester pre and post intervention, such as a sprint run, a vertical jump, balance, etc., as these skills favour neither males nor females. The results showed that mastery of many of the skills significantly increased for both males and females.

Conversely, Jago and Baranowski (2004) reviewed non-curricular methods to increase physical activity among youth. They stated that increased physical activity is needed through extracurricular opportunities due to decreased physical education classes being offered in schools. Extracurricular activities were offered an average of 3.2 days per week and attracted only 5.5% of the school population. They proposed that a possible reason for the low turnout was involvement in other community organizations. It was suggested that intervention programs be offered at local community venues such as the YMCA/YWCA. Since many of the interventions occurred in middle schools, it is possible that transportation home after school would be more difficult for this age group. This could be another reason for the low participation. Transportation may be a lesser barrier at the high school level due to public transportation and more autonomy at that age. School break periods such as lunch hour were identified as times when students could be physically active. This also prevents problems associated with transportation with after-school programs. Based on their review, it was

concluded that these non-curricular methods have increased physical activity levels for children and youth.

The Medical College of Georgia FitKid intervention program introduces students to a “fitogenic” after-school environment that promotes moderate to vigorous physical activity and healthy snacks, as opposed to an “obesogenic” one. (Yin, Hanes, Moore, Humbles, Barbeau,, & Gutin, 2005) A two-hour program immediately following school classes focuses on a mastery-oriented climate. This type of climate places high value on effort, learning and improvement, enjoyable age-appropriate activities that provide successful experiences, and cooperation among peers. The physical activity environment is non-competitive and positive feedback is given on a regular basis. The program is offered to grade three students at no cost, five days per week in a metropolitan area in Georgia for a period of three years. The program is led by certified physical education teachers, as well as other teachers and school staff. Teacher and staff turnover was found to cause disruption to the program. The program includes an 80-minute exercise intervention including 40 minutes of moderate to vigorous physical activity, muscle strengthening, stretching, and age-appropriate motor skill activities. The need to address transportation home for the student participants was again mentioned. In this particular program, the students were transported home by school buses paid for by program funds.

The authors noted the importance of early school administration involvement to create a realistic program that can be implemented in a real school environment. Participant recruitment was difficult since the onus was on students to deliver consent forms home to their parents or guardians. Mandatory parent events at school such as open houses or registration nights provided an opportunity to meet parents face-to-face. This approach would be difficult at the secondary school level as there are fewer opportunities for interpersonal communication with parents.

### **Conclusions and Lessons Learned**

Several successful interventions to increase physical activity have been created in the community and in schools. Schools can make significant contributions to increasing physical activity due to their potential to reach large numbers of students (Pate, Ward, Saunders, Felton, Dishman, & Dowda, 2005). “Schools provide an ideal environment for population-based primary prevention interventions directed at children and youth for two important reasons. First,

almost all children in developed countries are in school for a considerable period of time. Second, children from all risk groups can derive some benefit, and targeting all children avoids stigmatizing some and misclassifying others.” (Thomas, 2006) These interventions can take place on the way to or from school, at lunch or on breaks. Some schools have even offered modified curriculum physical education classes. These classes have shown improvements in the physical activity levels of their participants. Sadly, there are very few of these programs that target female adolescents specifically (Pate, Ward, Saunders, Felton, Dishman, & Dowda, 2005), a group identified to be at risk for low levels of physical activity. Although a few studies were geared to adolescent females, no study was found to be open to all female students and staff at their schools. The few studies that were geared to this target audience were offered as a physical education credit course and were only available to certain grades and females with low activity levels. Also, providing physical activity interventions during school classes limits the amount of time available to the girls to be physically active as some activities may take time to set up, or may occur at a different location outside of school, etc. Providing intervention programs to all females of varying physical activity levels and abilities may prove to be mutually beneficial.

There is a need to address gender differences in designing interventions, especially starting in middle school. As females are less likely than males to be involved in organized sport (Vilhjalmsson & Kristjansdottir, 1992), more studies need to focus on exploring organized physical activity opportunities. The majority of females enjoy physical activities that are different from that of males and their reasons for involvement are often different (Sallis, 1996 & Koivulva, 1999). Physical activities that are age-appropriate and appeal to adolescent girls are necessary in order to engage them. Mastery-oriented physical activities are important in order to increase self-efficacy amongst participants, which can ultimately lead to enjoyment and long-term participation. Listening to, and allowing input from the participants should be incorporated into the planning of the program (Brown, Birch, Teufel, & Kancherla, 2006).

Evaluations to determine effectiveness of physical activity intervention programs are essential. Longer-term programs of at least six months in duration are needed to increase the chances of sustained increased physical activity levels (Bautista-Castaño, Doreste, & Serra-Majem, 2004). It is therefore important to evaluate on a continuing basis to determine the sustainability of the physical activity intervention program. Having school administration and



staff involved early in the planning phase helps to create effective interventions that work well in the school environment.

### **Addressing the Limitations**

The FTPFFG program addresses many limitations and gaps identified by previous studies. There are gaps between physical activity opportunities that are offered and what is recommended (Jago & Baranowski, 2004). As well, it was identified that there is a need to increase extracurricular physical activity opportunities due to a decrease in physical education classes offered in schools (van Beurden, Barnett, Zask, Dietrich, Brooks, & Beard, 2003). The FTPFFG program increases accessible opportunities for physical activity for females outside of school hours. Thomas, Ciliska, Wilson-Abra, Dobbins, and Dwyer (2004) state that providing physical activity interventions in addition to regular physical education classes result in more positive outcomes.

Coakly (1998) acknowledges that many organized sports programs are geared to males rather than females. Thomas (2006) states a need to develop different types of programs for both sexes. FTPFFG allows females to create their own physical activity program based on the types of activities that they enjoy.

Few programs target female adolescents (Stone, McKenzie, Welk, & Booth, 1998). Those programs that are aimed at that target audience (New Moves and Project FAB) are not inclusive to all females (Neumark-Sztainer, 2003, and Jamner Schneider, Spruijt-Metz, Bassin, & Cooper, 2004). The FTPFFG program is inclusive to all female adolescents in their school regardless of age, weight, or physical activity level or ability.

Females were shown to have consistently higher levels of perceived barriers to physical activity. External barriers such as cost can negatively affect self-efficacy (Allison, Dwyer, & Makin, 1999). FTPFFG allows girls to find ways to overcome barriers, including cost, by providing free physical activity opportunities.

## Development of the FTPFFG Program

The FTPFFG program was created out of a demonstrated need to provide accessible physical activity opportunities for female adolescents since physical activity levels decrease with age (Stone, McKenzie, Welk, & Booth, 1998), and females repeatedly state more barriers to physical activity than their male counterparts (Allison, Dwyer, & Makin, 1999).

The Feel the Power Feel Fit girls program is based on Bandura's self-efficacy theory, (a component of his social cognitive theory). Bandura defines self-efficacy as "the conviction that one can successfully execute the behavior required to produce the outcomes" (Bandura, 1997, pg.79). Self-efficacy can determine how a person feels, thinks, motivates them self and behaves. Strong sense of efficacy enhances human accomplishment and personal wellbeing. People who possess high self-efficacy approach difficult tasks as challenges to be mastered rather than as threats to be avoided. Those who have low self-efficacy tend to avoid difficult tasks and situations. In providing a safe, supportive environment, with challenging yet achievable objectives, people are more likely to attempt and achieve their goals (Bandura, 1977).

According to Bandura (1994), there are four main ways to develop self-efficacy: through mastery experiences, by viewing others they view similar to themselves master skills, by receiving positive social and verbal feedback, and by positive somatic and emotional states. Based on the self-efficacy model, the FTPFFG program theorizes that if female adolescents are provided with challenging yet achievable physical activities, in a safe and comfortable environment, are able to view their peers being successful in participating in these activities, and receive positive feedback from peers and others, that this will hopefully lead to increased self-efficacy and potentially increased levels of physical activity.

A program logic model was created for the FTPFFG program containing the three main components of the FTPFFG program: education and skill building, promotion/social marketing, and environmental support/reorienting school and community services. Multi-component interventions that include an education and an environmental component have been found to be most effective in increasing physical activity (Thomas, Ciliska, Wilson-Abra, Dobbins, & Dwyer, 2004). Short-term objectives of the program are to increase awareness in the female teen community about the importance and benefits of physical activity for female adolescents and to plan, implement, and evaluate a health communication campaign targeted towards female teens

living in the Hamilton area. Long-term goals include working with community partners to promote physical activity opportunities for female teens, increasing access to those opportunities, and increasing the percentage of female teens participating in physical activity. For detailed information about the activities of the various components see Figure 1.

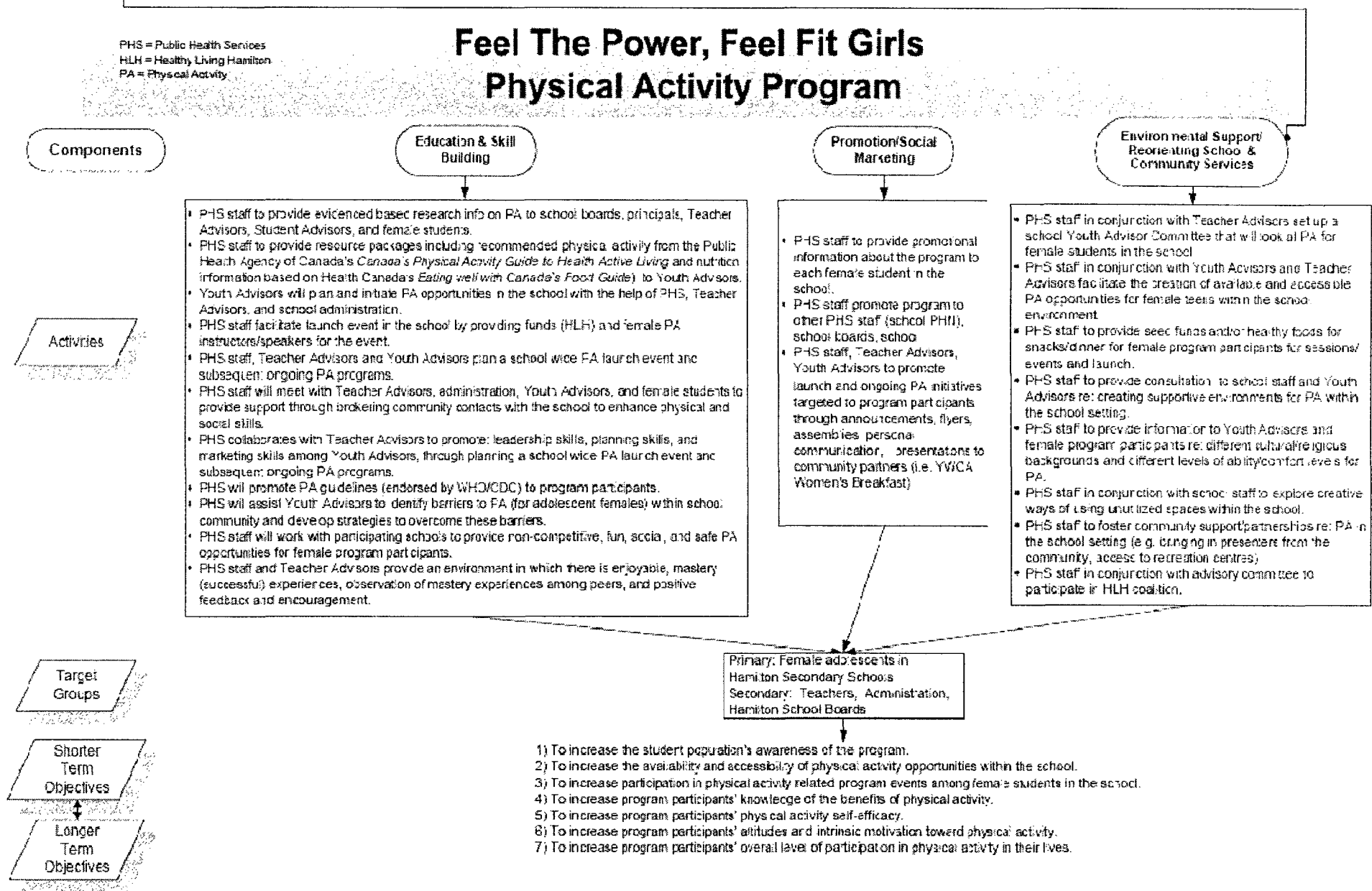


Figure 1: Feel the Power Feel Fit Girls Physical Activity Program Logic Model

## CHAPTER III - METHODOLOGY

### Study Sample and Recruitment

Two Hamilton area secondary schools were involved in the evaluation (schools A and B for reference). School board approval was given by each board of education after receiving and approving the research proposal and ethical approval from the Lakehead University Research Ethics Board. One secondary school from the public board (Hamilton-Wentworth District School Board of Education- HWDSB) and one from the Catholic board (Hamilton-Wentworth Catholic District School Board – HWCDSB) were purposely included in the study. Since several schools in the Hamilton area had already been involved with the FTPFFG program, the two schools were chosen by randomly drawing from those remaining schools that had not yet participated in the program after separating them based on their school board. The schools drawn also had to have administrative, teacher, and Public Health Nurse (PHN) support to implement the program in their school for the 2006/2007 school year.

All females in the schools had the opportunity to sit on the Youth Advisor Committee to help plan the FTPFFG program and launch for their school. Flyers were distributed to each homeroom teacher to advertise the committee and to recruit females from their classrooms. Additional posters were provided to the teachers involved in the program to post in the female washrooms and change rooms. An information session was set up to provide more details to the potential committee members about what the program entailed and expectations of commitment to determine if they were interested. From those females who volunteered to sit on the committee (Youth Advisors), consent forms were distributed to those who volunteered to participate in the study. Participants who came out to program activities and agreed to participate in the study were also given consent forms. Of the Youth Advisors and program participants who handed in consent forms, females were divided into groups based on grade. Two students were then randomly selected from each grade where possible to be more representative of the female student population for both Youth Advisor (YA) and participant groups. School A had a key informant interview with the school principal, a teacher and PHN focus group with eight participants, a Youth Advisor group with eight participants, and a

program participant group with eight participants. School B had a key informant interview with the school principal, a teacher focus group with four participants, a key informant interview with the school PHN, a Youth Advisor focus group with four participants, and a program participant group with six participants. Information regarding the characteristics of the focus group and key informant interview participants can be seen in Table 1.

Table 1: Characteristics of Key Informant and Focus Group Participants

	GROUP	GRADE					Total
		9	10	11	12	Unknown	
<b>School A</b>	Principal	N/A	N/A	N/A	N/A	N/A	1
	Teachers, VP, and PHN	N/A	N/A	N/A	N/A	N/A	8
	Youth Advisors	2	3	1	2	0	8
	Participants	2	3	3	0	0	8
<b>School B</b>	Principal	N/A	N/A	N/A	N/A	N/A	1
	Teachers	N/A	N/A	N/A	N/A	N/A	4
	PHN	N/A	N/A	N/A	N/A	N/A	1
	Youth Advisors	1	0	2	1	0	4
	Participants	2	1	2	0	1	6
					<b>TOTAL:</b>		41

### Research Tools

Key informant interview and focus group questions for principals, teachers, Youth Advisors, and program participants were devised. The focus group questions were pilot tested on a group of female Youth Advisors as well as teachers that participated in the FTPFFG program during the 2005/ 2006 school year. A questionnaire was created for a selection on non-program participants. Key informant interview, focus group, and questionnaire questions were based on the research objectives.

### Data Collection Procedure

Qualitative data were collected via focus groups and key informant interviews from principals, teachers, PHNs, YAs, and female program participants. All participants

were required to submit a signed consent form prior to their interview. For those under the age of 18, a signature from a parent or guardian was also required. Focus groups and key informant interviews were conducted during May and June 2007, six months after program implementation.

Key informant interviews were conducted individually with the principal at each school. The interviews took roughly 20 minutes each to complete. A total of six focus groups were conducted with teachers, YAs, and females who participated in the program. The PHN from school A participated in the teacher focus group, while a separate key informant interview was conducted with the school B PHN due to a conflict with the date of the teacher focus group. Focus groups took roughly 45 minutes to one hour per group to complete. One person facilitated each focus group and key informant interview for consistency. A note taker was present for the focus groups to identify which comments were made by which participants. Two audio recording devices were used during all focus groups and key informant interviews for transcribing purposes.

A one page, two-sided questionnaire that took roughly five to ten minutes to complete was given to a selection of females who decided not to participate in the program (n=80, School A n= 28, School B n= 52) at each school to determine what prevented their involvement. From each school, a list of homeroom teachers was obtained. Homeroom teachers were then separated by grade and a homeroom teacher from each grade (nine through 12) was randomly selected from each school. Surveys were then distributed to females in each of the selected homeroom classes. Attendance logs provided to the teacher advisors captured program attendance for each activity session. Other data were collected via YA Committee session minutes.

### **Data Analysis Procedures**

The qualitative data collected from the focus groups and the key informant interviews were recorded and transcribed. They were then imported into Ethnograph software (Version 5.08<sup>TM</sup>). All transcripts were read in order to create a master list of themes and sub-themes that emerged from the data. The transcripts were then revisited and codes were applied to segments of the text based on the master list. After coding, the compiled data was analysed. Comparisons within the school and between the schools

were made and conclusions were drawn. The results were also compared to the literature. Quantitative data collected from the questionnaire given to non-participants were compiled and analysed using SPSS software (version 13.0) to obtain some descriptive statistic frequencies.



## CHAPTER IV - RESULTS

### Female Youth Advisor Planning Committee Meetings, Launch, and Program

Female YAs at school A met for five 40-minute sessions during lunch time to plan and create their program and launch. Forty-six females signed up for the launch, not including YAs, and a total of 41 females - seven teaching staff, and four public health staff - participated in the launch. Launch activities included: bhangra, hip hop, and salsa dancing. School B met for a total of seven one-hour after school sessions to plan their program and launch. Launch activities included hip hop, salsa and yoga. Seventy-six females signed up to attend the event (not including YAs). Sixty-five students, five teachers and three public health staff attended the launch. The breakdown of student attendees by grade for each school is listed in Table 2. Of interest, the largest attendance by both schools was among the grade ten students.

Table 2: Number of Launch Participants by Grade

	School A	School B
Grade	Number of Attendees	
9	3	19
10	14	25
11	11	10
12	8	6
Post 12	0	1
Unknown	5	4
<b>Total:</b>	<b>41</b>	<b>65</b>

Four main areas were addressed in the focus group and key informant interviews: the culture of the school both in general and in relation to physical activity, program successes, challenges to the program, and suggestions for improvement.

## **School Culture**

Information provided helped to paint a picture of the school environment. Sub-themes that emerged from discussions included school culture and demographics, physical activity opportunities in the school, gender and ability equity in relation to these opportunities, barriers to physical activity female students face, role models, and school staff support.

### ***Overall School Culture and Demographics***

School A is a very multicultural secondary school with 407 students being born outside of Canada and 18 percent who are registered as English Language Learners (students enrolled in English as a Second Language courses). There are more than 30 languages spoken in the school and more than 50 percent of students speak a language other than English in their homes. The primary language spoken among students other than English is Serbian. This multiculturalism has implications for the types of physical activities that should be available to students, especially female students. Physical activities and various cultures are mentioned in greater detail below. During the 2006/2007 school year, school A had a total of 1,020 students in attendance (489 females and 531 males) and 73 teaching staff. The majority of students either walk to school or take public transit which could make it easier for them to participate in physical activity opportunities outside of school hours. Having one common lunch period lasting 55 minutes also makes it easier to provide physical activity opportunities available during this time without competing for gym space that might otherwise be used for physical education classes in schools that have more than one lunch period.

With some diversity, but not as multicultural as school A, school B had a student population of 1,212 during the 2006/2007 school year and approximately 71 teaching staff. School B has a significant music program in which many students are involved which could limit participation in other activities such as physical activity. Many of the students get to and from school via board provided school buses as opposed to public transportation. This creates no flexibility in the times they get picked up which can also

make it difficult to participate in physical activities before or after school. School B had three lunch periods lasting 45 minutes each. Having multiple lunch periods can provide a challenge to provide physical activity opportunities at that time in terms to the short time frame, as well as competing for gyms and other spaces for physical activity.

### ***Role Models***

Principals and teachers at both schools felt that teaching staff were good role models to students in that they led healthy, physically active lifestyles. Principals indicated that several teachers made use of their respective school fitness centres. Many of the student focus groups validated these comments. As one YA at school A stated, "... it might not be that (school staff) are talking about being physically active, but they're already... it's like their action and they're showing it to us." An example of this was a teacher who rode his bike to school each day, according to one of the school A participants. School B participants stated that they thought that the school had many physically active *female* teachers. Students in the focus groups felt that teachers who were involved in the FTPFFG program were great at role modeling the importance of physical activity. More about teacher role modeling in the FTPFFG program are discussed below.

### ***Support***

The school A principal thought the FTPFFG was "a great thing"; he then went on to say, "I think that any effort to improve the health and well-being of female teachers and students is a good thing." He also stated that he was willing to put money into encouraging healthy lifestyles and wellness. This shows a level of support for this type of health initiative at the administrative level in school A.

Both principals were quick to commend their staff on their supportive and committed nature to the school and its students. In general, the school A principal stated, "we're fortunate...we don't have a shortage of people who want to get involved. The people who teach here, I think, are pretty happy and they embrace (this school), not just

from 8 to 3, but beyond that teaching/working day.” More specific to the FTPFFG program, the school B principal noted that there were several enthusiastic teachers involved in the program, and the school A principal stated that teachers at his school “embraced” the program.

While school B teachers stated that they were enthusiastic about the program at the beginning, that they wanted the students to achieve success and were willing to help show female participants how to use the physical activity equipment, the PHN and students at the school felt differently. The PHN at school B felt that there was not any real buy-in, help, or enthusiasm for the FTPFFG program by either the school administration (principals, vice principals) or teaching staff. She noticed similar outcomes with other public health programs attempted at the school, with few being sustained. More about support will be discussed later.

### *School Physical Activity Opportunities and Equity*

Results from the non-participant questionnaires (School A n= 28, School B n= 52) showed that those females who did not participate in the program still found physical activity to be important. No students from school A or B felt that physical activity was “not important” or “somewhat important”. Results from both schools on their views on the importance of physical activity were very similar (Table 3). Therefore it is important to provide females in schools equitable opportunities to be physically active.

Table 3: Importance of Physical Activity

	School A		School B	
	Percentage	Actual Number	Percentage	Actual Number
Not Important	0%	0	0%	0
Somewhat Unimportant	0%	0	0%	0
Neutral	19%	5	14%	7
Somewhat Important	31%	9	37%	19
Very Important	50%	14	49%	26
<b>TOTAL:</b>	<b>100%</b>	<b>28</b>	<b>100%</b>	<b>52</b>

Both principals noted a large number of physical activity opportunities available to students at their schools. Principal A stated that they offer almost every sport and principal B stated that they offer 54 co-curricular activities (although not all physical-activity related). They also mentioned great facilities, including the school weight rooms (requiring an athletic fee) and fields. Both schools offered lunch time intramural programs. Both lunch periods were short - 55 and 45 minutes for schools A and B respectively. Open gym time was available to students in the evenings. However, in school B the only activity offered was co-ed basketball in the winter and off-season.

Teachers at both schools also noted the ample number of physical activity opportunities. However, a teacher at school B stated that there were “too many sports going on at one time”, and teachers at school A stated that this could be seen as either a positive thing or a challenge for students. School A also provided a grade nine showcase to inform new students what co-curricular activities were available to them and to entice them to get involved.

While many school sports existed, several equity issues surrounding these opportunities appeared. Both YA and participant groups mentioned gender and physical ability inequities. In terms of ability, it was noted by school A YAs that there was a noticeable division between female athletes and non-athletes in the school. School A participants felt that there were many physical activity opportunities as far as sports teams, but that you had to be “really, really good to be on a team.” For this reason, they noted that many people did not even bother to try out. Therefore, while there were some

students on sport teams, there were many more students who were not. School B participants echoed this: “It’s competitive or whatever, if you’re not a good athlete and you’re not good at sports you feel a little bit self-conscious, you’re not going out and trying it for fun because everyone else is a little better than you.” There are no guarantees that you will make the team even if you are good at the sport, as pointed out by school B participants, since there are limited spots on teams. They also stated that at their school it was often the same athletes on each team throughout high school, which further limited participation. School B participants mentioned that, “...there is a lot of focus in this school on sports.” Another stated, “I think the problem is that we put our focus on being involved in sports instead of just being active because not all girls like playing basketball and soccer and stuff.” Comments from school A YAs indicated that they would like to see more fun physical activity opportunities available to them that were not sports teams.

When it came to gender equity, school B YAs felt that there were equal opportunities for male and female athletes on sports teams, but not for non-competitive physical activity and physical fitness opportunities. However school A and B participants did not agree; they felt that there were more opportunities for males. A participant from school A gave the example at her school in which there was a male football team but not one available for females. School B participants also felt that there was a lack of coaches for females.

Intimidation also seemed to be a factor in decreased female participation. A school B participant stated that it was intimidating to be on a co-ed team. One of the school B YAs stated that it was “awkward” for females to use the weight room since it was mostly occupied by males, including the male wrestling team. School A YAs mentioned that while hockey is open to all, it is mostly males who try out. School B participants noticed that mainly males are involved in intramural soccer and that it is “very competitive”. Those females who do try out are often older students. Perhaps a reason for this feeling of intimidation can be explained by comments made by school A participants who felt that males at their school were “aggressive”, “showed off”, felt that they were “strong and cool”, and that they were more “fit” than females.

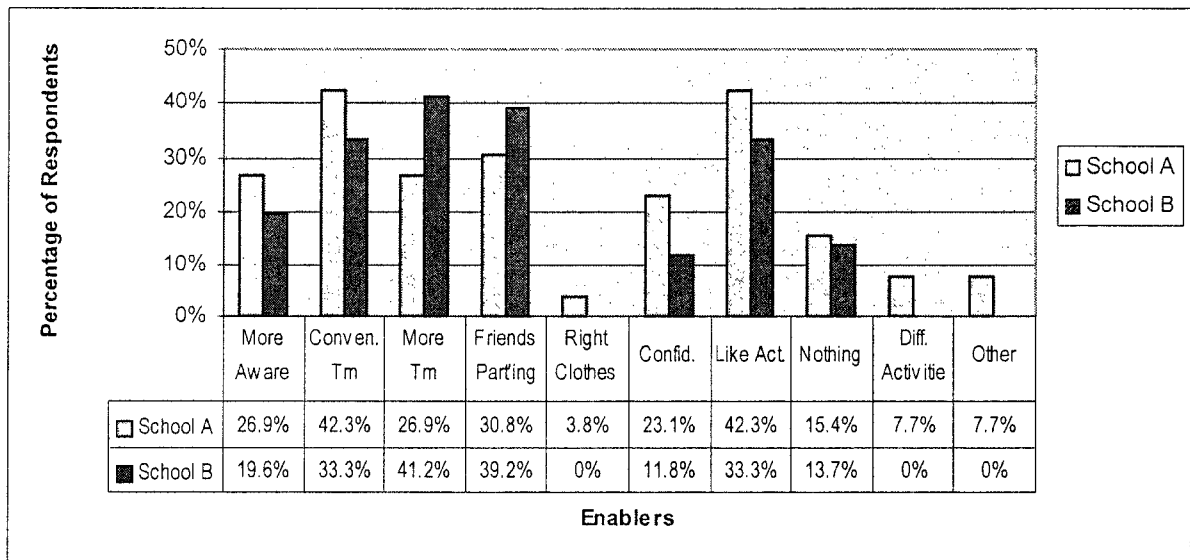
### *Barriers to Physical Activity for Female Youth*

Barriers were identified that were specific to each school. For school A, having a large percentage of multicultural students, several cultural barriers were cited. School A teachers stated a couple of “cultural restrictions” including that a large number of their students were not able to be physically active in front of males. As well, some female students were not allowed to stay after school and participate in the program. Some were allowed to participate with special permission after submitting a form to their parents to inform them that there would be no males present. For others, there was no compromise: “...there is one girl in particular who was keen, came to all the committee meetings, her mother does not allow her to stay after school- with a letter or without a letter”. One of the school A YAs stated her own experience: “for me, my parents are Muslim, so they kind of find it weird for girls doing active things... and they are not comfortable and happy with it”.

For school B, transportation was seen as a “big issue” as many students came from considerable distances and lived on the escarpment (a physical barrier). These students were brought in by board school buses as opposed to public transport. This issue was mentioned by all groups at school B. One participant stated, “I take the bus up on to the (escarpment); a lot of people have just one bus, and that’s the only way of getting home.” The other issue specific to this school was involvement in the music program. The PHN felt that students might not see the FTPFFG program as being as important as the band, since she said, “everyone wants to be in the band”. It was her understanding that there was a “one hundred percent commitment or you are out” mentality to being a band member that left no room for other activities.

When non-participants (School A n= 28, School B n= 52) were asked to check off what would make it easier for them to participate in the FTPFFG program, school A students stated they would be more interested if they liked the activities, if the program were offered at a more convenient time, and if their friends participated, as being the top three choices. For school B it was if they had more time, if their friends participated, and if they liked the activities (Figure 2).

Figure 2: What Would Make it Easier to Participate in the FTPFFG Program?



### Successes, Challenges, and Areas of Improvement

There were several successes, challenges, and identified areas of improvement that were described by study participants. The focus group discussions were helpful in providing suggestions for future improvement of the program.

#### FTPFFG Sessions

Public Health staff (a Physical Activity Specialist and Public Health Nurse) facilitated sessions with the YAs in conjunction with the PHN attached to the school (depending on their availability). These sessions provided information on the importance and benefits of physical activity, barriers to physical activity for adolescent females, and ways to break down these barriers. The sessions also helped the committee to create a launch and ongoing physical activity program.



### *Successes*

Focus group participants had the opportunity to comment on the quality and quantity of information provided during sessions. School A YAs commented that the information provided during the sessions “made us want to be healthy and participate in physical activity more”. In terms of amount of information, both school A teachers and YAs felt that it was the right quantity. School A teachers added that information provided at sessions was not overwhelming and “did not feel like another class” and that the girls were not “preached at”. They also felt that the YAs “probably went away with a better understanding”.

The sessions were also found to be helpful in the development of teamwork and skill development (planning, etc.). School A YAs stated that their group worked well together and that they “tried to put (their) minds into the people that would come” and not just activities that they would enjoy. They did this through gathering ideas and opinions from their peers. Their teachers agreed, stating that the YAs had “great ideas that flowed together” and that the girls were “extremely open” showing a degree of trust. The school B PHN stated that the YAs had a great deal of ideas that they wanted to implement and that there was “a core group of girls who really wanted it to work.”

School A teachers felt that they had good support from Public Health. They stated that it was “helpful to have somebody give us direction to get it off the ground”. They mentioned that they liked the opportunity of involvement for the YAs, “I really like how you asked the girls what they wanted to do so they felt like they owned the club... that was really effective”. School A YAs liked the flexibility of Public Health staff during sessions. Public Health was described as “easygoing and helpful”. Examples provided from other schools to guide their own planning was thought to be helpful.

### *Challenges*

School B teachers did not share the same view on the sessions. Conversely to all other groups, they felt that the sessions were like “another class” and too long. They felt that there was too much talking and not enough planning.

School B YAs' main concern about the sessions was not about the length or quality of the information presented, but rather the lack of support and help they perceived from their teachers. They felt that the teachers "pretty much just put all the pressure, all the work on us...". They stated that the teachers could have been more supportive in providing them with supplies they needed (such as materials for posters) to advertise the launch and events and by talking to other teaching staff about the program. Overall, they stated that they did not feel much guidance from their teachers: "just even to encourage us, they really didn't do that too much".

School B YAs also stated the difficulty they found in working in sub-committees within the committee sessions (i.e. advertising group, food group, etc.) They felt that working this way did not allow them to feel like they were working as a team and made them unsure what the other groups were working on. These sub-groups made some feel that they did not have the option to provide input to those groups.

### *Improvements*

To improve sessions, teachers from school B would like less talking about physical activity issues and more planning. As one teacher stated, "let's go chop, chop, chop, chop. Let's get this over with, let's get the launch, let's get ready". The YAs at that school suggested working more as a larger group instead of breaking into smaller task groups in order to be more collaborative and feel more like a team. They also stated that they needed a way to ensure more of a commitment from the YAs although they could not state what this would be. School A teachers stated that they would like to see more nutritional information incorporated into the sessions as well as the program.

### *Promotion*

### *Successes*

In terms of successful promotion of the FTPFFG program, several media were thought to be effective. Teachers at both schools stated that they relayed information about the program to female students. Teachers at school A felt that those females who came often to the program were those students who had heard about it from a teacher,

“...the ones that did come out often were ones where teachers as part of this group have said to them, this is what’s happening tonight, here’s a flyer about it.” School A YAs and participants also mentioned word of mouth from friends as an effective means of promotion. The PHN at that school agreed, stating, “that personal invitation makes a huge difference.”

Program T-shirts were seen to be helpful in promoting the program. One teacher at school A stated, “those shirts I think were a good thing in that, the days we’re having (the program) I wear it, a few of us wear those shirts and the kids say – oh, yeah, and where is it? It’s a reminder to them, so I think those were good advertising things.” One school A YA echoed these remarks by stating, “whenever you wore the T-shirts, people would actually come up to you and ask you, oh, what is this about... it was actually good advertising for the activities that we had.”

YAs at each school felt that the information booth that was set up in the cafeteria to advertise their respective launches was a good strategy. Teachers at school A agreed since it was highly visible and many females signed up for the launch at the booth. Other advertising media that were utilized were announcements, posters, and pamphlets. School A also included an article about the program in their student newspaper.

### *Challenges*

While both schools stated great promotion of their launches through various means, the promotion of the ongoing program was found to be more challenging. School B teachers felt that the extensive promotion that was done for the launch could not be sustained from week to week. However, the PHN at that school found the promotion to be “very poor”, which prevented several students from knowing what the program was about. Although the teachers stated that they made announcements, the PHN said, “every time I went in to the school, I looked on the announcement board... there was never anything about that there”. She also stated that there was nothing posted on the school bulletin board or posters around the school.

School A had their own set of unique challenges due to cultural conflicts: “we couldn’t raise the profile in some ways... someone suggested we go out in the lobby some night and do something, people will see us, but there are girls for whom that’s

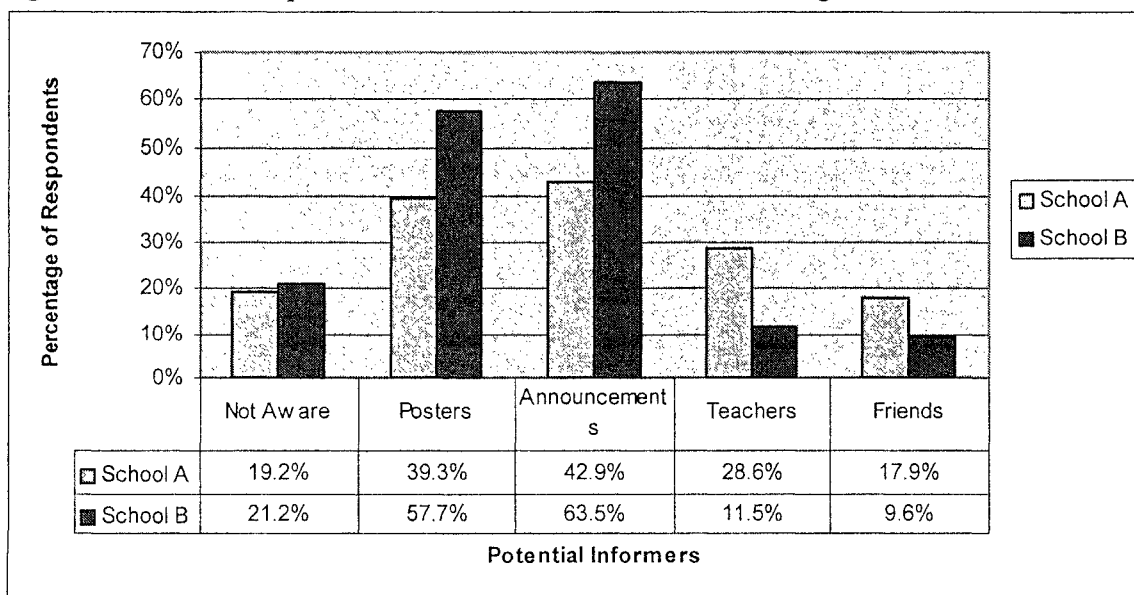
inappropriate, ...so we have to advertise in a different way". This was an issue as some students could not be physically active in front of male spectators.

It came up several times by the majority of the groups that announcements were seen to be an ineffective means of advertising the program. Several participants mentioned that students either did not listen to announcements or could not hear them due to classroom disruption. Students at school B stated that the problem with their announcements (for those who did listen) was that they were made the day the activity was supposed to occur. This did not allow students time to make arrangements, especially those who needed to be bussed to school.

Although T-shirts were seen as effective, there was some concern about having the logo of the FTPFFG program on them as opposed to their own program name (committee members were able to create their own name for their school). This was seen to be confusing. A member of the school A teacher group stated, "'cause we're calling our group 'Girls Get Active' and then we've got the 'Feel the Power Feel Fit', so which is it, and it's a mouthful if you say both".

When non-participants from the questionnaire (School A n= 28, School B n= 52) were asked to state if and how they became aware of the program, contrary to remarks made about the ineffectiveness of announcements, announcements were cited the most by both schools A and B. Other means of becoming aware can be found in Figure 3.

Figure 3: How Participants Became Aware of the FTPFFG Program



### *Improvements*

Interviewees were asked to identify what improvements could be made for more effective promotion of the program. School B teachers did not feel that they could make any improvements since they felt they were doing all they could. After some thought however, they did come up with the suggestion of advertising the program on their teacher voicemail to ask other staff to promote it in their classrooms.

The school PHN and students at school B felt very differently. The school PHN identified a need for more promotion as discussed above. The school B PHN and student groups all mentioned the need to improve announcements as announcements were thought to be “boring”. They suggested adding music in the background in order to catch students’ attention. It was recommended by school B participants to have announcements at least one day before, preferably a couple of days before activities, since announcements were hard to hear. This also gave students time to plan for the activities (especially those who needed to make transportation arrangements). Repeating the announcements would allow them to hear them a couple of times and would act as reminders. For instance, they suggested having one announcement at the end of the day before the activity. The PHN thought having announcements at the end of the day would be more effective since “they’ve wound down and they’re lethargic, then they would listen more”. The other issue with the announcements was that school B participants did not find them very clear. Announcements were very vague stating just the name of the group and that all girls were welcome. One participant stated that they needed to “explain it better, because I don’t think people even knew what it was”.

School B YAs stated that although they discussed wearing their T-shirts, they did not get a chance to wear them to promote the program. Permission would have been required to do this since they are required to wear uniforms. The YAs felt that this would have been an effective way to promote the program, since they would stand out amongst the other students. Again, because the YAs had their own name for their program, having the FTPFFG logo on their T-shirts was thought to be confusing. Some stated that they would like to have T-shirts with their own program name. They said the T-shirts with the FTPFFG logo were “part of the campaign, but now we need to own it”.

Since sign-up booths used for the launches were seen to be effective, school A teachers suggested that they set it up in September at the beginning of the school year and continue for the ongoing activities. School A YAs thought that this could be combined with a demonstration of some of their activities, although they would still need to be sensitive to cultural issues. Instead of having the booth in the cafeteria, school A participants felt that it would be more effective in front of the auditorium since “more people pass by down there”. Each school should therefore determine the best location in their school to get the most exposure.

There were suggestions for improving interpersonal communication. One suggestion was to ask teachers at their September staff meeting to promote the program and invite students to participate. Classroom promotion of the program via YA visits to raise the profile of the program would be a benefit as would having older or “popular” students inviting younger students to come out. Other suggestions included having an all-girls assembly and inviting a guest speaker who could “really get them pumped up for it”, putting posters up in the girls washroom, obtaining a message centre where information and a list of upcoming events could be showcased, or having a display at an open house with invited students and parents. This might be particularly helpful in school A to explain the program to parents to help to break down some of the cultural barriers that their daughters face. Technological suggestions put forth included placing information on the school’s electronic communication system, and having the PHN email a calendar of events and reminders to program participants as teachers are not allowed to email students.

### *Enjoyment*

#### *Successes*

A large aim of the program is that programs are seen to be fun and enjoyable. The school A principal noticed this personally at his school. He stated, “I’m seeing a lot of people who smile” and “I know they’re coming back and that they enjoy it”. School B teachers felt that those who came out to the activities enjoyed them, and the PHN said that she observed participants at the launch having fun. School A teachers found the

activities to be a positive experience, especially with hip hop since the girls “loved it” and wanted to have it again. The teachers themselves stated that they really enjoyed the activities. Activities were seen as fun, not necessarily as work or physical activity, which was very positive since the teachers felt that the students “believe in being physically active, but they like doing fun things”. School A teachers mentioned that the girls were able to master having fun while doing something physically active.

The social nature of the program added to the enjoyment of all participants. The principal at school A felt that the program allowed females an opportunity to “broaden their social circle”. This was found to be true at school A where teachers felt that the launch helped break down social barriers when members of the school female volleyball team joined in. They also felt that the launch and activities gave girls a chance to enhance their social skills: “I think it helped not just from the physical point of view, but I think from the social point of view; they were interacting with sometimes a fairly large group of teachers and nurse and other people, and for these kids that was a real experience too and they seemed to be very comfortable doing so...”

All students in the focus groups enjoyed the social nature of the activities. The students stated that doing the activities with their friends “made it more fun”. They also liked the fact that they had the opportunity to meet new people. As one participant pointed out, you could do a workout and then “cool down with people that you’ve never talked to before”.

### ***Challenges and Improvements***

Information offered during focus group sessions did not provide any data related to challenges or improvements to program enjoyment.

### **Incentives**

A variety of incentive items were provided to those involved in the program. YAs and teachers received T-shirts adorned with the FTPFFG logo, lanyards, as well as information packages full of health education resources, pads of paper and pencils. They were also provided healthy snacks at each session. YAs were able to obtain volunteer

hours to go towards their required 40 hours of community involvement for high school graduation. Program participants received a goodie bag at the launch as well as a light dinner (i.e. pizza, veggie and fruit trays, etc.) and a chance to win some prizes (physical activity equipment, spa gift certificates, etc.). During the focus group interviews, those involved in the program had the opportunity to comment on these incentive items.

### *Successes*

Teachers from school B felt that the physical activities themselves were seen as an incentive since the girls were not likely to have paid for them on their own. Adding to this, teachers from school A thought that as well as the activities, participating with other females was an incentive. School A teachers and participants noted that “everyone likes getting free things”. School A participants liked the “food, freebies, and stuff”. School A YAs also enjoyed the food and thought that it was important, and teachers from school A observed that the girls liked the snacks provided at the sessions. Teachers from school A and a couple of school B YAs noted that they liked the T-shirts.

### *Challenges*

School B teachers and PHN had different views on providing incentive items than did the rest of the participants. School B teachers did not feel that food should be provided at the sessions, not only because it “kept things long”, but also because they felt that this was the main reason the girls were coming to the sessions. The PHN at school B did not feel that incentives should be used for the program: “I really feel that if a person is really interested in it that they don’t really need incentives. I almost feel like you’re buying them to come to the program and if you run out of money or incentives, they quit because they’re not getting anything out of it and what you want them to see is that they’re getting fitter and better health out of the program. That should be the incentive...”

Another issue emerged in regards to the design of the T-shirts. Not all students were fond of them, as one school B YA pointed out, “I’d wear it to promote it and help out, but I wouldn’t wear it”.



### *Improvements*

An intrinsic incentive mentioned from the teacher group was to provide progress checks for participants. The remaining suggestions were for extrinsic incentives, including having the group's picture in the yearbook, which would be an incentive especially for "those not on a club or sport team". Membership cards, prizes and, certificates were thought to increase commitment of students. Registration for each new participant was suggested so that they could "walk away with an envelope of goodies". As one school A participant stated, "I think more girls would come out if there was food and freebies and stuff... who doesn't want free stuff?" School A YAs felt that by providing incentives, it might get girls out to the events so that they could then decide if they liked it. School B YAs felt that providing incentives would make participants more likely to come out and work towards reaching a fitness goal. Although not originally for incentives, school B teachers later mentioned that perhaps providing a small prize for each participant who came out for a given number of weeks would help to increase numbers.

### *Activities*

After the launch, both schools provided activities. School B provided these activities after school while school A provided them alternatively at lunch and after school. Table 4 shows what activities were offered, and how many participants came out to each. These data came from program attendance taken at each activity session by the teachers. During the focus groups, comments on the type, location, and timing of activities were mentioned.

Table 4: Activities Offered and Program Attendance

	<b>Activity</b>	<b>Date</b>	<b>Number of Participants</b>
<b>School A</b>	Ballroom Dance	Nov. 14	13
	Hip Hop	Nov. 21	14
	Aero-kickboxing	Feb. 13	cancelled due to snow
	Aero-kickboxing	Feb. 27	9
	Hip Hop	Mar. 27	cancelled due to provincial testing
	Hip Hop	May 1	13
	Ballroom Dance	May 8	15
	Hip Hop	May 23	9
<b>School B</b>	Yoga	Nov. 13	3
	Hip Hop	Nov. 22	3
	Weight Room	Nov. 28	6
	Water Aerobics	Dec. 14	3
	Weight Room	Jan. 10	5
	Weight Room	Jan. 18	2
	Weight Room	Feb. 6	3
	Weight Room	Feb. 13	cancelled due to snow
	Weight Room	Feb. 22	6
	Unknown	Feb. 28	cancelled due to snow

### *Successes*

In terms of physical activities for the ongoing program, hip hop dance came up numerous times. Teachers at school B felt that hip hop drew the most participants, that the girls enjoyed it and that they were able to “achieve a level of success” with it. School A teachers agreed, “I think that hip hop, and I’ve heard this from teachers at other schools, it seems to be the most popular activity.” Dance in general drew out girls who “wouldn’t normally compete in a sport.” School A YAs and school B participants also cited that they really enjoyed hip hop and other forms of dance. School B teachers and PHN mentioned the weight room as another key activity. The teachers felt that the

weight room was “something that none of (the girls) would normally ever go into, not those girls”. They stated that the girls were able to experience success in the weight room and the teachers felt good being able to show them how to use the equipment properly. As one teacher said, “... now hopefully, when they are in there, (they) won’t be uncomfortable going to use it again”. The PHN felt that the weight room had more participants since the blinds on the windows could be closed for privacy.

This type of supportive environment seemed to be important to the girls. Participants at both schools as well as school A YAs liked the fact that it was girls-only. Having only girls during program activities provided a comfort factor - “it wasn’t intimidating”. One student stated that for those girls who were shy, they would more likely participate if it were girls-only since they felt “more confident so they do better at it.” Girls-only seemed especially important in school A, which is very multi-cultural, “...that’s a big part of it... for the girls that can’t do other sport activities because of the cultural reason... it met that need perfectly.” Providing a private space where “no males could see us so that those girls who have cultural barriers could come out” was important. Providing non-competitive activities was favourable since it “gave the girls more confidence and not have to feel ‘I can’t do this’”. Another participant from school A stated that “there wasn’t any competition, I liked that”. She felt it was more fun since there was no need to compare herself with others.

It appeared that the girls also enjoyed the novelty of the activities and the ability to choose the activities they wanted to participate in. Teachers felt that activities were “something they wouldn’t normally do”. Hip hop, salsa, and yoga were considered “something different”. According to program participants, these were activities that people wanted to try but had not in the past. By providing these new experiences, it enabled girls to get a “taste” of the activity so that they could decide if they liked it and could then continue with it if they chose. Not only did they enjoy activities that were not mainstream, “...they weren’t the normal basketball, soccer, hockey kind of activities”. They also appreciated the variety: “we had stuff like swimming, yoga, dancing and weight training. If you didn’t like one, you didn’t have to do it. You could choose your activities”.

Teachers at school A felt that providing the same activity a few times allowed the girls to learn new skills, build on them and “develop some mastery of (the activity)”. The flexibility of the program was enjoyed by school A participants in that it was not as strict as a team sport. Free activities were seen as positive as well. “The fact that there was no cost to them was good because they can try out so many different things. So then, if you tried yoga and you really liked (it), then maybe you could look into taking a class, but people usually don’t want to have to put money out to try something out if they don’t even know (what it is about)”.

Most comments related to the physical activity instructors were positive. School A teachers felt that the instructors were “wonderful”. School B YAs felt that it was important to have outside instructors as opposed to school teachers since, “it would have been pretty awkward if (our teacher) was teaching us some salsa moves” and school A YAs stated that they were “more better than a teacher you see everyday”. School A YAs and all participants liked that the instructors provided positive feedback and were able to simplify the dance steps for them. School B participants liked that the instructors “took everything slow and made sure we got it” while school A participants found the instructors approachable: “the (instructor) was like your friend... if you had difficulties (understanding) you could tell the (instructor)”.

### *Challenges*

Both schools addressed the issue of low program attendance after the launch. When asked why they thought this was the case, aside from the promotional and support issues identified, school B teachers named several possibilities. They felt that there was “a lack of commitment” from the students. One of the teachers mentioned an aerobics program she once offered at the school that “dwindled to nothing”. Too many sports going on at the same time and bussed students were also mentioned. School A teachers also noted there were many other activities going on in the school. Some of the school A YAs mentioned hearing that some females did not like that it was girls only and wanted to have more co-ed opportunities. School A and B participants both thought that some girls were just not interested in the program. School A participants felt that some girls

thought the program was boring, while others would only come out if “freebies” were offered.

Activities offered were a problem at school B. The YAs at that school stated that there was not enough variety in the activities offered. They felt that their voice had not been heard in regards to the types of physical activities that they wanted: “It was kind of like false hope... I remember we had kickboxing and stuff like that we suggested, and we never got around to doing that”. While many ideas had been circulated at the sessions, none of these activities were offered. The PHN at school B offered some possible reasons for this. She said, “I think the teachers kind of intervened as far as what activities they were going to do”. She also noted that the activities were not the ones that the students had chosen. She felt that the teacher was hesitant to offer activities the girls wanted due to cost, even though money was supplied for this purpose. The teachers at school B did not feel that the weight room worked well, and they felt that the students were “turned off” by it. Interestingly, this was the same activity they mentioned having a higher attendance and that students were able to learn the proper techniques. The other issue around activities was the location. This was a concern at school A since the library was small and crowded, and their gym’s acoustics were not great, making it difficult to hear instructors.

Teachers did not feel they could fulfill the role of an instructor since “the students are sick of seeing us all the time”. Therefore, while outside instructors were instrumental in leading the activities, school B teachers were frustrated that they were not available right at the end of the school day when they ran the program. They stated that students would not wait around until later when they could arrive. As they said, “instructor timing is very important”. They also wondered why they had to set up the instructors at their school and were hoping that this could be coordinated through public health.

Program timing was another sub-theme. School A teachers stated that the “moving time slot” of the program (changing nights and times of day) caused confusion about when the program ran. They, as well as the YAs, found that regardless if the program ran at lunch or after school, you were always going to “rule some people out”. Teachers noted that conflicts in teachers’ schedules meant that not all were able to make every activity night. Lunch time was seen to be difficult for activities as students did not

have enough time to eat lunch, and were less willing to get sweaty as there was not enough time to shower or change. They also stated that many students used this time to do homework and study for tests. School B YAs did not feel lunch was the best time since, “that’s our own time”. Other issues were snow days and other interruptions including holidays that caused several problems at school A. The YAs mentioned that this caused confusion since students started to forget when the program was. School B participants stated that the day and time the program was offered in their school (chosen by the teachers) was not good planning since it was during the same time slot as the choir and the band, in which many students participate.

### *Improvements*

Teachers and students provided options that they would like to see as future program activities. School A teachers wanted to continue with hip hop, since it brought out the most participants. They planned to offer it for the remainder of the school year. One teacher also suggested providing other forms of dance that used similar body movement as hip hop to expand the girls’ exposure to different activities. Teachers wanted to provide the same activity more than once “so that (the girls) could build on that and develop some mastery of it”. Other suggestions from the teachers and PHN included having the cheerleaders at the school come in to teach cheers to the group and providing an activity session where participants could bring in a sibling to participate with them. The suggestion of bringing in a mother had been put forward, however the girls did not think that this was a good idea. The PHN stated that it would be great to make the program more of a workplace health initiative to include all female staff and create a healthy place for everyone.

The participants and YAs at the schools provided very similar responses, but these differed from the teacher responses. While most of the girls did like dance, all groups stated that they would like other options as well. One thrill seeker from the school A YA group wanted “bigger stuff like rock climbing, more fun, exciting, and dangerous- thrilling” She also mentioned a ski trip, and “something no one has done before... something big!” School A and B participants also wanted some sports to be

offered such as soccer or basketball “even if (we) just dribble a basketball around for half an hour”. The participants wanted “a mix of some sports as well as (non-competitive) activities”. School B participants added that they would like more field games such as capture the flag, especially when the weather is nice outside. Other suggested activities included going to a roller rink, and laser tag.

Locations of the activities were also important. School A YAs cited that on school grounds, they would like to use different venues such as the gym, library, or outside based on the activity offered. They liked the idea of being outside sometimes instead of being “stuck in the building”, especially when the weather was nice. This may have been more important to school A students, as the gym they used was small and had terrible acoustics. Students also wanted options for off school property. A school B YA stated that, “instead of doing stuff just around the school, or using the rec. centre, actually going around the city trying different stuff... that would be fun”. This was echoed by a school A YA who also wanted to do activities outside of the school, “you’re actually going to go on a fun field trip and do things!”.

The day and time of activities was a contentious issue among the various groups. No one date or time seemed to work best for all. However, based on their experience, school A teachers felt that it was best to have activities offered on the same night and at the same time to make it more consistent and less confusing for the students. They suggested experimenting to see what day is most convenient for the majority and then “pick one (day) and stick with it”. They offered the program after school and felt that this worked since girls were more likely to “want to get sweaty” at that time. Since offering the program at different times would always limit some students from participating, they felt that having the program at lunch as well as after school, would open the program up to more students.

The students at both schools felt that a lunch time program would be helpful in addition to the afternoon session. For school A, it meant that those girls who could not join in after school for cultural reasons could participate. For school B, it would help solve the transportation issue for those students who were bussed. Since school B had three lunch periods, the logistics of this would have to be considered. School B participants suggested that the afternoon sessions run after choir practice so that those

involved in choir could still participate. Both school A participants and YAs also liked the idea of having more than one session per week.

Suggestions for opening the program up to other students was put forth by school A teachers and PHN. They wanted to offer physical activity opportunities for boys as well. They stated that several boys do not participate in organized sport because they are self-conscious and that there are a number of boys who like individual sports and non-competitive activities. They also suggested having a co-ed program that provided activities for both boys and girls in order to have a “balance” and “not just focus on one particular group”. This was something that school A YAs had mentioned wanting to have as well.

### Support

#### *Successes*

Teachers at school A noted several pieces that helped provide them support. They felt that having six female staff members involved provided a sense of support among the teachers: “that was great, we thought, ok, I can do this”. Having a large contingent of teachers relieved them in the sense that, “there’s always going to be some days that (some) can’t go after school”. This way they would always have at least one staff member present.

Public Health was seen as another support for teachers. The principal at school A stated that they relied greatly on Public Health at their school. He said, “we wouldn’t do these initiatives if we didn’t have Public Health lighting the flame, encouraging, building networks and making the connections between people of expertise to (our school)”. His reason for this being that, “we are so knee deep in things that we do here, having that extra layer is important”.

Support for female students came from Public Health, teachers, and peers. School A students stated greater support by teachers than school B. Teachers at school A tried hard to make the program inclusive for all girls, but also tried to “encourage those kids that tend not to participate”. For those girls who may not be allowed to participate after



school due to cultural reasons, teachers at school A wrote a school letter to the parents explaining that the program was appropriate, girls-only, and supervised. Teachers were seen as supportive by school A participants and YAs - “they always try to get us involved in the activity and keep us active”. One YA stated, “I like how there were so many teachers and the teachers were really getting excited too so they made you want to be excited just the way they were...”. Girls felt recognized when teachers told them that they had seen them at the activities. YAs stated that they remember teachers encouraging students to come to the events in their classrooms. They also appreciated being “backed up” by teachers when they were encouraging their peers to come out to the activities: “...and so it wasn’t just from our voice, it was also from an authority figure too...”.

While school B mentioned problems with support (see challenges below), participants did mention that during one activity, teachers were “encouraging”. One participant mentioned, “it was fun getting to know them in that kind of setting where we’re all trying to do these yoga poses and none of us were really good at them, but they were really encouraging... it made you feel good they’re really supportive that way”.

School A participants felt that activities were done in a “very good environment”. One stated, “you didn’t worry of doing badly ‘cause I know everyone there wouldn’t be so disrespectful”. They stated that this support from peers was not necessarily felt during physical education class. One participant mentioned one activity night when they were learning the fox trot and waltz which was causing some confusion among participants, “...some people didn’t really understand it, but then I saw a lot of people helping each other and we were all really friendly and if one person got it, we would all cheer and yell and be all happy for each other and we were really supportive”.

### *Challenges*

Support seemed to be much more of a challenge for school B. The school B PHN and YAs provided their experiences with the program. The school B PHN did not feel as though the school was on board with the program: “I kind of think that the administration wanted it because everyone else was doing it, but I don’t think that they were 100% behind it. None of them ever came by to see how they were doing”. Both the PHN and

YAs stated similar issues in dealing with the teachers at school B. The PHN felt that the girls were not receiving positive feedback after activities and “weren’t getting the support they needed or the independence that they needed to make it their group, not the teachers’ group”. Although she felt that the teachers liked the idea of the program, they “just took over the reins and that ruined the whole thing”. The YAs echoed similar comments, stating that they felt “pressured” by teachers: “we were lucky enough to have the four or five teachers that came to the meetings and stuff, but they didn’t really help us afterwards.” Another YA stated that it was “kind of bad that they weren’t there for us”.

As the PHN at school A said, the availability of the PHN was another important factor in the ongoing sustainability of the program. She stated that she “didn’t observe anything except the (launch)”. Therefore, availability of the school PHN plays a factor in the effectiveness of the ongoing program.

Support issues from school A were minimal. The school A principal stated challenges of teacher support due to retirement or transfers of staff which could be a problem. He stated that for a program to work smoothly, you need a staff member who is not only on board with the program, but one that will be around “long term”.

### *Improvements*

The school A principal and teachers really felt that although there was a need for more than one teacher to help run the program, there needed to be one contact person who had time to dedicate to the program in order to coordinate instructors and book the locations for the activities. School A teachers also appreciated the PHN taking over some of the responsibilities by coordinating instructors, and this may be helpful in other schools.

According to the school B PHN, there needs to be better buy-in and support, not just from administration, but also from teaching staff, for the program. As well, since the program at her school seemed to be very teacher-driven, the program needs to be student led to “allow girls to make the decisions”. She also felt that having teachers other than gym teachers involved would be helpful since most of the girls expect the gym teachers to be fit. Having teachers who are also be struggling with physical activity may help

students to relate better and feel more comfortable in the program. For sustainability, the PHN should be involved in the program at all stages. Meeting times need to be coordinated with their schedules.

### ***Funding***

One-time seed money was provided to each school by Healthy Living Hamilton to provide the school the opportunity to pay for instructors and/or fitness equipment for the program. Additional funds were provided to each school for their launch to cover the cost of any honoraria for guest speakers, physical activity instructors, goodie bags, prizes, and food.

### ***Successes***

Funding provided to the schools was seen as not just helpful, but crucial. The school A teachers stated that the money was needed to pay instructors to lead activities that the students enjoyed, such as hip hop, something that none of the teachers felt comfortable teaching. School A YAs also picked up on the fact that the money provided enabled them to bring in outside instructors free of cost for the activities that they chose. As previously mentioned, free programming was highly valued. The money also helped to provide the YAs' T-shirts and other incentive items for the program.

### ***Challenges***

While funding was found to be invaluable, the challenge for future funding remains. As one teacher at school noted, "...without that money, I'm not sure who we would be able to bring in." "I think definitely the money (is important) of course to be able to bring in the people to do the hip hop and to bring in those things that kids really like to do."

### *Improvements*

Continued money for the program was seen as important by both principals. There was not much provided during the discussions on how to obtain more funds. A suggestion by the school A PHN was to obtain a list of potential funding sources to sponsor the program. Since the principal at school A stated that he would be willing to put money into a program such as this, cost sharing may be another option. Having older students lead activities for which they might have training, or cheerleaders to teach the participants, are other options previously suggested that would help to keep program costs down.

## CHAPTER V – SUMMARY AND CONCLUSIONS

### Summary

The Feel the Power Feel Fit Girls program ultimately aims to increase physical activity levels of female adolescents by providing accessible physical activity opportunities. It thereby aims to reduce barriers to physical activity and increase self-efficacy. The program allows Youth Advisors to create a physical activity program geared to adolescent females that attend their school. The purpose of this study was to conduct a formative evaluation of the FTPFFG program in two Hamilton area secondary schools. Information was collected both qualitatively and quantitatively. Qualitative information was collected via a series of key informant interviews and focus groups. Quantitative information was obtained through a questionnaire to provide some basic descriptive statistic frequencies from a selection of non-program participants. Results of the evaluation provided information about the overall cultures and physical activity cultures of the schools, and successes and challenges of the program. Areas of program improvement identified by teachers, PHNs, Youth Advisors, and program participants will help to shape a more effective program.

### Conclusions

The results of this study validated several findings from the previous literature review.

Salmon, Ball, Crawford, Booth, Telford, Hume, Jolley, and Worsley (2005) stated the necessity of creating a program that is practical and feasible in cost. Both school principals stated that funding was essential to the provision of this type of program in their schools. Sustainability of the program will depend partly upon ongoing funding for program resources such as equipment, and especially to bring in outside instructors that were determined to be important by the students. Suggestions such as looking for potential outside program sponsors, cost sharing with school boards, or having older students lead activities may be alternatives that would help alleviate funding issues.

Salmon et al. also declared that it is necessary to have the support of administration and teachers. This was evident in school A where students stated that they felt support from the teachers involved in the development and implementation of the program, unlike in school B where Youth Advisors and the school PHN felt a lack of support from teachers and administration. It is imperative that teachers involved in the program believe in it and have time to commit to the program in order for it to be successful. Teachers also need to realize that the program needs to be Youth Advisor driven and that the students need to be heavily involved in the decision making process, including choosing physical activities (Brown, Birch, Teufel, & Kancherla, 2006). According to the school B PHN, this would enable them to feel ownership of the program, to achieve a sense of empowerment, and to increase their commitment. In the case of school B, where the program was mostly teacher driven, the Youth Advisors commented on their feelings of lack of support and did not feel that their voices had been heard. They also stated lack of support for program promotion by teachers, and felt that this overall lack of teacher support negatively affected the number of program participants.

In the FTPFFG program, school PHN support is also invaluable. The school PHN should be involved in the program from the beginning so that he or she is aware of each step in the process. Greater involvement in the sessions would provide him or her with a greater understanding of the program and may help to sustain the program after the launch as the PHN works closely with the school. Unfortunately, PHN work conflicts sometimes make their involvement in the program difficult.

Overall, students stated enjoyment with the physical activity sessions. Previous studies have found that guest physical activity instructors, field trips, and other incentives were strengths of physical activity interventions aimed at adolescent females (Neumark-Sztainer, 2003). Students stated that they enjoyed the physical activity instructors and preferred them to classroom teachers at the school. Although all activities had been offered in the school, student participants from both schools stated that they would like to participate in physical activities outside of the school environment. While there was some disagreement about the use of incentive items for program participants by school B teachers and PHN, all other focus group participants stated that they enjoyed the

incentive items and felt that they were beneficial to the program. Students involved in the New Moves program stated that they found the manuals and training logs provided to be helpful (Neumark-Sztainer, 2003). This may be another incentive item that could be incorporated into the FTPFFG program. Sallis (1996) stated that girls outnumber boys in non-competitive activities such as dance, aerobics, swimming, etc. This is apparent by the types of activities that were chosen by Youth Advisors for the activity program as can be seen in Table 4.

Adolescents state having many barriers to participating in physical activity, with females claiming to have more (Allison, Dywer, & Makin, 1999). Several barriers were identified during the focus groups that were consistent amongst the schools. While several physical activity facilities and opportunities were identified at both schools, many of these were not considered accessible to all females due to several identified barriers. These included involvement in other clubs that prevented them from participating, gyms being used by athletes on sports teams, not feeling they had the skills to participate in certain sports, more opportunities available to males, and intimidation to use facilities such as weight rooms being utilized by males. School A had additional cultural barriers due to their high level of multiculturalism. Although some students stated they would like more co-ed physical activity opportunities, many student focus group participants stated that they enjoyed that the program was girls only, especially for students in school A. This is consistent with the findings of Neumark-Sztainer (2003). School B had challenges related to transportation and conflicts with the school's significant music program. The FTPFFG program should therefore be adapted and tailored in schools that run the program to meet their individual needs. Staff, administrators, students, and the PHN who are immersed in this culture can provide insight into making the program work in their school.

Other components that were found to be successful in physical activity programs by previous researchers could be incorporated into the FTPFFG program. Neumark-Sztainer (2003) found that parental involvement through informational post cards sent home every two to three weeks was helpful in increasing support for adolescent females involved in the New Moves program. This may be an acceptable way to include parents

in the FTPFFG program since student focus group participants stated that they would not necessarily want to have their mothers present at FTPFFG activities.

Inclusion of an education component surrounding screen viewing was found to increase the effectiveness of interventions in terms of reducing obesity (Bautista-Castaño, Doreste, & Serra-Majem, 2004 and Campbell, Waters, O'Meara, & Summerbell, 2005). While not currently part of the FPTFFG program, this may be a piece to be considered.

Integrating nutritional information has been found to benefit physical activity interventions aimed at adolescent females (Bautista-Castaño, Doreste, & Serra-Majem, 2004 & Neumark-Sztainer, 2003)). While minimal nutritional information is included in the program, students stated that they enjoyed this component, and it was suggested that it would be beneficial and welcomed to include a larger nutritional component into the program. It would be therefore worthwhile to consider adding a larger nutritional component to the program.

The FTPFFG program addresses the gap of limited physical activity programs targeting all female adolescents in their school. Stone, McKenzie, Welk, and Booth (1998) identified the need for more studies on the effectiveness of interventions to prevent decline of physical activity in female adolescents. This evaluation adds to the evaluation literature in this area. Further evaluations including an outcome evaluation of the program will further benefit the program and help to determine ongoing sustainability. The findings of this evaluation will not only be helpful to create a more effective program in Hamilton, but could also be beneficial to other health units, recreation coordinators, and program planners interested in planning and implementing a program to increase physical activity levels of adolescent females.



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## Appendix A – Introduction Letter



Dear Potential Youth Committee Member,

My area of interest as a Master of Public Health student with Lakehead University is physical activity and adolescent females. Research has shown that females tend to be less active than males and that activity levels decrease with age, and dramatically when students enter high school. I will be conducting a research project entitled: "Feel the Power Feel Fit Girls Campaign: A Formative Evaluation" at your school. The research is intended to gain an understanding of whether the Feel the Power, Feel Fit Girls campaign is successful and what improvements could be made. This information is important when planning physical activity programs for female teens to increase physical activity levels and increase overall health and wellness.

You have expressed an interest and have participated in the Hamilton Public Health Feel the Power Feel Fit Girls Committee funded by Healthy Living Hamilton at your school. One small group discussion, six months into the program (May, 2007), is needed if you decide to participate. The discussion will take place at your school at a time that does not interfere with classes and will take approximately 45 minutes. Tape recorders will be used during the discussion solely for recording response data. This information will be kept confidential and names will not be used in the final published report or presentation. Information collected will be securely stored at Hamilton Public Health during the study and securely stored at Lakehead University for seven years after the study is completed. Participating in this discussion and providing input about your experience as a committee member would be greatly helpful and appreciated. You are free to withdraw from the discussion at any time without consequence.

If you agree to participate in the study, please sign the attached consent form and return it to your teacher advisor. You will also need your parent or guardian to sign and return a copy if you are under the age of 18. Should you have any questions or concerns, I can be contacted at (905) 546-2424, ext. 6408 or by email at [almassey@lakeheadu.ca](mailto:almassey@lakeheadu.ca). My supervisor, Dr. Bill Montelpare, can be reached at (807) 343-8481. You may also contact Lakehead University's Research Ethics Board at (807) 343-8283. Please keep this sheet for your records.

Thank you for your cooperation.

Sincerely,

Alison Massey  
BPHE, BEd, MPH Candidate

## Appendix B - Consent Form



I \_\_\_\_\_ have read and understood the cover letter in regards to the study: Feel the Power Feel Fit Girls Campaign: A Formative Evaluation. I understand the purpose of the study and that I have the right to stop my participation in the study at any time. I am aware that I will be required to provide some information regarding the Feel the Power Feel Fit program at my school that should take no longer than one hour to complete. I am also aware that Lakehead University will be storing any data collected for the term of seven years and that the completed study report will be available for public viewing. No names will be used in the final report. I understand that I am able to access this report in 2008 by contacting the researcher.

In providing my signature below, I agree to participate in this study.

\_\_\_\_\_  
Signature of Participant

\_\_\_\_\_  
Date

### Appendix C - Focus Group Questions- Teacher Advisors/ PHN

1. This program is partly based on 3 ideas: 1) that participants will have mastery experiences – they will experience success when participating in the program; 2) that participants will observe their peers experiencing success and 3) the participants will experience positive feedback from their peers, from teacher advisors and program leaders. Do you think that these 3 things happened in the program? Can you share some of your observations of this?

- Enjoyment factor
- Did they come back
- Enrollment
- Verbal/non-verbal feedback
- Fun
- Could do it

2. Each school has promoted the FTPFFG program according to the needs of that particular school. Why did you choose your particular strategy to promote the program and how successful was it? What do you think worked well? Would you use the same strategy again?

- Posters
- Pamphlets
- Announcements
- Assemblies
- Face-to-face classroom visits

3. One of the things we want in this program is some sustainability – we want your school to continue with the program. Can you comment on what would make it easier for your school to stay involved in the FTPFFG? If there are any challenges, what are they and how do you figure they could be overcome?

- Money
- Teacher advisors
- Support from PHS
- Administration support
- Incentives

4. During the sessions with the youth advisors and yourselves, some of the goals of the session were to provide some education around physical activity, the benefits of physical activity, the barriers, and creating opportunities for physical activity in your school. Can you comment on the sessions? How do you feel about whether these goals have been met or not as a result of the FTPFFG sessions?

- Quality and quantity of training
- More informed about physical activity
- Able to create new opportunities



5. One of the goals of the FTPFFG campaign is to make physical activity more available and accessible in the school for girls. Could you comment on how this has happened in your school?

- Intramurals
- Sports teams
- Sports clubs
- Open gym time
- Role models
- Administration support
- Staff support
- Parents
- Equipment available and accessible
- New opportunities

6. There have been many meetings and interactions between PHS staff (The Physical Activity Specialist, the PHN, etc.) and school staff since FTPFFG program was implemented. Can you comment on the working relationship that has developed as a result of the program?

- Challenges
- Mutual
- Driven by PHS
- Positive
- Negative
- How improved

7. To improve a program, it's important to look at lessons learned. I would like to get your ideas on lessons learned. Can you share things that worked well and why? Now I would like to ask you the challenges you faced. If you were able to overcome some of these challenges, how did you do it?

- Staff support
- Start up money
- Incentives
- Gym time
- Time

8. One of the goals of the FTPFFG program was to get as many female students involved as possible. Why do you think some students participated and others did not?

- Lack of time
- Not interested
- Work commitments after school

9. That concludes all of my questions. Do you have anything else you want to add?

## Appendix D- Focus Group Questions, Youth Advisors

1. This program is partly based on 3 ideas: 1) that participants will have mastery experiences – they will experience success when participating in the program; 2) that participants will observe their peers experiencing success and 3) the participants will experience positive feedback from their peers, from teacher advisors and program leaders. Do you think that these 3 things happened in the program? Can you share some of your observations of this?

- Enjoyment factor
- Did they come back
- Enrollment
- Verbal/non-verbal feedback
- Fun
- Could do it

2. Each school has promoted the FTPFFG program according to the needs of that particular school. Why did you choose your particular strategy to promote the program and how successful was it? What do you think worked well? Would you use the same strategy again?

- Posters
- Pamphlets
- Announcements
- Assemblies
- Face-to-face classroom visits

3. During the sessions with the teacher advisors and yourselves, one of the goals of the session was to provide some education around physical activity. We talked about the benefits of physical activity, the barriers, and how to go about creating opportunities for physical activity in your school. Can you comment on the amount and quality of these sessions?

- Too much information
- Not enough information
- Presented at a reasonable level
- Realistic solutions
- Helpful to share with program participants

4. One of the things that impact physical activity is the culture of the school. Can you describe the physical activity culture of your school?

- Support for physical activity
- Intramurals
- Sports teams
- Sports clubs
- Open gym time
- Role models

5. There have been many meetings and interactions between PHS staff (me, Jane, and your PHN) and your teacher(s) since the FTPFF program started. How did you see/feel about this working relationship throughout the sessions?

- Challenges
- Mutual
- Driven by PHS
- Positive
- Negative
- How improved

6. One of the goals of the FTPFFG program was to get as many female students involved as possible. Why do you think some students participated and others did not?

- Lack of time
- Not interested
- Work commitments after school

7. One of the goals of FTPFFG program was to offer all-inclusive physical activity programming that girls were interested in. Girls at your school had input into what type of programs they'd like to see. How did the program meet your needs?

- Non-competitive
- All girls
- Fun
- No pressure
- No cost

8. Can you describe some of your positive experiences in the program? What were some experiences in the program that were not positive?

- Supported by peers
- Supported by leaders
- Role models
- Increased self-esteem
- Not getting voice heard
- Not feeling a part of the group

9. To improve a program, it's important to look at lessons learned. I would like to get your ideas on lessons learned. Can you share things that worked well and why? Now I would like to ask you the challenges you faced. If you were able to overcome some of these challenges, how did you do it?

- Staff support
- Start up money
- Incentives
- Gym time
- Time

10. That's it for me for questions. Anything else you want to add?

## Appendix E - Focus Group Questions, Program Participants

1. This program is partly based on 3 ideas: 1) that participants will have mastery experiences – they will experience success when participating in the program; 2) that participants will observe their peers experiencing success and 3) the participants will experience positive feedback from their peers, from teacher advisors and program leaders. Do you think that these 3 things happened in the program? Can you share some of your observations of this?

- Enjoyment factor
- Did they come back
- Enrollment
- Verbal/non-verbal feedback
- Fun
- Could do it

2. Each school has promoted the FTPFFG program according to the needs of that particular school. Why did you choose your particular strategy to promote the program and how successful was it? What do you think worked well? Would you use the same strategy again?

- Posters
- Pamphlets
- Announcements
- Assemblies
- Face-to-face classroom visits

3. One of the things that impact on physical activity is the culture of the school. Can you comment on the physical activity culture at your school?

- Support for physical activity
- Intramurals
- Sports teams
- Sports clubs
- Open gym time
- Role models

4. One of the goals of the FTPFFG program was to get as many female students involved as possible. Why do you think some students participated and others did not?

- Lack of time
- Not interested
- Work commitments after school

5. One of the goals of the FTPFFG program was to offer physical activity programming that girls are interested in. Girls at your school had input into what type of program to offer. As a participant, can you comment on how the program did or did not meet your needs?

- Non-competitive
- All girls
- Fun
- No pressure
- No cost

6. Can you describe some of your positive experiences in the program? What were some experiences in the program that were not positive?

- Supported by peers
- Supported by leaders
- Role models
- Increased self-esteem
- Not getting voice heard
- Not feeling a part of the group
- Needs to be more often

7. To improve a program, it's important to look at lessons learned. I would like to get your ideas on lessons learned. Can you share things that worked well and why? Now I would like to ask you the challenges you faced. If you were able to overcome some of these challenges, how did you do it?

- Staff support
- Start up money
- Incentives
- Gym time
- Time

9. That's all I have to ask. Anything else you'd like to add?

## Appendix F - Key Informant Interview Questions, Principal

1. One of the goals of the FTPFFG campaign is to make physical activity more available and accessible in the school for girls. Could you comment on how this has happened in your school?

- Intramurals
- Sports teams
- Sports clubs
- Open gym time
- Role models
- Administration support
- Staff support
- Parents
- Equipment available and accessible
- New opportunities

2. One of the things that impact physical activity is the culture or environment of the school. What can you tell me about the physical activity culture at this school?

- Support for physical activity
- Intramurals
- Sports teams
- Sports clubs
- Open gym time
- Role models

3. One of the things we want in this program is some sustainability or continuity of the program. We want the school to stay involved with the program. Some things make this easier or difficult. Can you comment on how we can make it easier for your school to stay involved in the FTPFFG? If there are any challenges, what are they? What can we do to overcome them?

- Money
- Teacher advisors
- Support from Public Health Services

4. A program of this type can have a number of benefits; can you give us some examples of benefits that you have seen in your school as a result of the program?

- Programs
- Environment
- Students
- Student-teacher interactions?
- Greater teacher role-modeling?
- PE courses

5. To improve a program it's important to look at lessons learned. What are your ideas on lessons learned - can you share any lessons from the Feel the Power Feel Fit Girls campaign in your school.

- Involvement of the girls
- Supportive staff
- Seed or start-up funds/money helpful

6. Are there any concerns raised about the program? Do you have any comments on how the program might be improved?

- Students
- Teachers
- Administration
- Time
- Money

7. I don't have any further questions, is there anything else you'd like to add?

## Appendix G - Non- Participant Questionnaire



Thank you for taking the time to fill out this questionnaire. Please note that you are not to include your name. The following questions are to obtain some information about the “Feel the Power Feel Fit” girls’ physical activity program at your school. Please select the appropriate answer(s).

1. Which, if any, of the “Feel the Power Feel Fit Girls” programs for females did you participate in?

Launch (kick off event in cafeteria)

If you participated in the “Launch” only, please explain why you did not participate in the full program: \_\_\_\_\_

Ongoing program

**If you checked either of the above boxes, you do not need to continue the survey**

Did not participate

**Please continue completing the survey.**

2. What grade are you in?

Grade 9

Grade 10

Grade 11

Grade 12

Returning student

3. How old are you?

13

14

15

16

17

18

19 or older

4. How did you learn about the “Feel the Power Feel Fit Girls” physical activity program? (Check all that apply)

Not aware of the program

Posters in the school

Announcements made over the PA system



- In-class presentation
- Teachers
- Friends
- Other (please list) \_\_\_\_\_

5. How important is being physically active to you?

- Very important
- Somewhat important
- Neutral
- Somewhat unimportant
- Not important at all

6. What would make it easier for you to participate in the “Feel the Power Feel Fit” girl’s physical activity program? (Check all that apply)

- Being more aware of the program
- Activities offered at a more convenient time
- Having more time
- If my friends were participating
- If I had the right clothes/shoes for the activities
- If I felt more confident to do the activities
- If I liked the type of activities
- Nothing would make me interested
- Different activities (please list) \_\_\_\_\_
- Other (please specify) \_\_\_\_\_

7. Are you currently participating in regular physical activity?

- Yes
- No (If no, do not answer question 8)

8. (If yes from question 7) Where are you currently participating in regular physical activity? (Check all that apply)

- At school (e.g., school team, intramurals)
- In the community (e.g., team sports, individual sports, recreational)
- At home
- Other (please specify) \_\_\_\_\_

**Thank you for your help!**  
**Please return to your teacher when you are finished.**