

Sport Commitment in High School Swimming

by

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Abstract

Introduction: High school swimming in Alberta is characterized by an emphasis on participation and inclusion regardless of ability level or competitive aspirations. For many students, this is their first meaningful exposure to the sport. The purpose of this study was to explore the potential of high school swimming programs as an avenue for increasing physical activity and sport commitment in less active adolescents. The following four areas were explored: the impact of high school swimming on participants' physical activity levels, the relationship between sport commitment and physical activity, the determinants of sport commitment, and intentions for continued participation in swimming outside of high school. **Methods:** Forty-six participants were recruited from a high school swim team that was chosen for its stability, longevity, and success in attracting and retaining large numbers of swimmers. Participants' physical activity levels were measured pre-season, mid-season, and post-season, using the Physical Activity Questionnaire for Adolescents (Kowalski, Crocker, and Kowalski, 1997). Mid-season, participants also completed a questionnaire measuring seven constructs from Scanlan, Carpenter, Schmidt, Simons, and Keeler's (1993) Sport Commitment Model. Eight participants were also interviewed using the Scanlan Collaborative Interview Method (Scanlan, Russell, Wilson, & Scanlan, 2003). **Results:** Participants who were less active pre-season had significantly higher physical activity post-season. However, the relationship between sport commitment and mid-season or post-season physical activity was only significant for participants in Grade 12. Several constructs from the Sport Commitment

Model were found to be important sources of commitment for these participants. Sport Enjoyment had the strongest positive relationship with commitment, followed by Valuable Opportunities and Personal Investments. Other Priorities had a significant negative relationship with commitment. After analysing interview data, Social Support, Desire to Excel, and Team Tradition were all determined to be important sources of strengthened commitment. The interview results also suggested that participants who joined the team without having any prior competitive swimming experience developed an appreciation for the sport and a desire to continue swimming outside of high school. **Conclusions:** High school swimming may have a positive impact on the physical activity levels of less active adolescents, and it certainly has potential for facilitating a long-lasting commitment to the sport of swimming. Other swim programs hoping to increase sport commitment in adolescents should recognize the importance of competent, caring coaches, encourage positive social interactions, provide opportunities for monetary investment, and foster team tradition.

Preface

This thesis is an original work by Heather Larson. The research project of which this thesis is a part received research ethics approval from the University of Alberta Research Ethics Board, Project Name “Commitment in High School Swimming”, No. 00040170, September 3, 2013.

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Chapter 1: Introduction

Canadian adolescents are not getting enough physical activity, and this may lead to serious health consequences in the future (Colley et al., 2011; Janssen & LeBlanc, 2010). One way of contributing to daily physical activity is through participation in organized sport. Swimming is a sport with many health benefits that can be done recreationally or competitively by people of all ages. However, competitive swimming with a club often requires a significant time commitment and thus is plagued by a high dropout rate, especially when swimmers reach adolescence and find that they need to devote more time to their studies (Butcher, Lindner, & Johns, 2002).

High school swimming in Alberta provides a less time-intensive alternative that is characterized by an emphasis on participation and the inclusion of students regardless of ability level or competitive aspirations. While some of the students on high school swim teams also swim competitively with clubs, for many students, this is their first meaningful exposure to the sport. Other students are giving the sport a second chance, after having dropped out of club swimming.

The purpose of this study was to explore the potential of high school swimming programs as an avenue for increasing physical activity and sport commitment in adolescents who are not adequately active. Mixed methods were chosen in order to achieve both breadth and depth in terms of the data collected, and the Sport Commitment Model (Scanlan, Carpenter, Schmidt, Simons, & Keeler, 1993) was used as a framework for examining the determinants of students' commitment to their high school swim team and also to the sport of

swimming. While the Sport Commitment Model constructs have been studied quantitatively (using various sport commitment questionnaires) and qualitatively (using the Scanlan Collaborative Interview Method), to my knowledge, these methods of data collection have never been used together in the same sport commitment study until now.

Chapter 2: Review of Literature

Physical Activity in Canadian Children and Youth

Canadian children and adolescents have reached new lows in inactivity, receiving failing grades in the Active Healthy Kids Canada (AHKC) report card every year from 2007 to 2012. This report card is compiled by experts in the area of physical activity, and provides a comprehensive annual assessment of the state of physical activity among Canadian children and youth. The only reason why the grade for physical activity levels was raised to a “D-“ in 2013 was because of the new inclusion of data for 3-4 year olds, who are much better at obtaining the recommended amount of daily physical activity than are older children and adolescents (AHCK, 2013).

Adolescents have been found to be particularly inactive (Colley et al., 2011). Studies show that as children move into adolescence, both participation in sport, and overall physical activity levels, decline (Canadian Fitness and Leisure Research Institute [CFLRI], 2013a; Findlay, Garner, Dafna, & Kohe, 2009). Data from the ongoing Canadian Physical Activity Levels among Youth (CANPLAY) study consistently demonstrate these age-based disparities in physical activity (CFLRI, 2013b). The CANPLAY study uses pedometers to measure the daily steps of approximately 10,000 randomly selected Canadian children and youth (CFLRI, 2014). In their 2009-2010 study, 5-10 year old children averaged 12,981 daily steps, 11-14 year olds averaged 11,521 daily steps, and 15-19 year olds averaged just 10,160 daily steps (AHKC, 2011). The Canadian Society for Exercise Physiology (CSEP) recommends a minimum of 60 minutes of moderate

to vigorous physical activity (MVPA) for children and youth aged 5 to 17 years (CSEP, 2014). Considering that the equivalent of 60 minutes of MVPA is approximately 12,000 daily steps, (Colley, Janssen & Garriguet, 2012), it is clear that these older children and youth are falling short.

Impact of Physical Activity on Health

Inactivity puts youth at risk for a number of diseases. The World Health Organization (2013) attributes approximately 21–25% of breast and colon cancers, 27% of diabetes and 30% of ischaemic heart disease burden to physical inactivity. Janssen and LeBlanc (2010) conducted a systematic review of studies related to physical activity, fitness, and health in school-aged children and youth, and found that physical activity was associated with numerous health benefits. Even modest amounts of moderate to vigorous physical activity (MVPA) were associated with health benefits in high-risk (e.g. obese) children and adolescents (Janssen & LeBlanc, 2010). Aerobic activities had the greatest impact on obesity and cardiometabolic health measures, while high-impact and weight-bearing activities were the best for bone health (Janssen & LeBlanc, 2010).

Contribution of Sport to Physical Activity

This inactivity comes in spite of 74% of Canadian children and youth participating in organized sports (CFLRI, 2013a). Organized sports may be delivered through either club or school programs, and are distinct from informal sport participation such as engaging in pickup basketball games or training independently for a 10K race. With all the attention that organized sports receive in North American culture, it is worth examining the actual impact of

participation in sport on physical activity levels. The most recent CANPLAY survey data indicate that children and youth who participate in organized physical activity and sport average almost 1500 more steps per day than non-participants, bringing them closer to the goal of 12,000 daily steps (CFLRI, 2013b).

Earlier research from Katzmarzyk and Malina (1998) indicated that for 12-14 year old males and females, 55% and 64.5% of their respective moderate to vigorous energy expenditure (MVVEE) occurred during participation in various organized sports. These amounts contributed 20.4 % and 16.3% of their total daily energy expenditure (TDEE) for males and females, respectively (Katzmarzyk & Malina, 1998). These results were taken from participants' activity diaries (Katzmarzyk & Malina, 1998). A similar study of a sample of 13- to 16-year-old males in Portugal revealed that 35-42% of their daily MVVEE and 11-13% of their TDEE was achieved through participation in a variety of organized sports (Machado-Rodrigues et al., 2011). These sport participants were significantly more physically active than non-participants in the same age group (Machado-Rodrigues et al., 2011). This study was strengthened by the addition of accelerometers as a measure of physical activity (Machado-Rodrigues et al., 2011).

However, one recent U.S. study using accelerometry found that less than one-quarter of their 7-14 year old participants obtained the recommended 60 minutes of MVPA through their organized sport practice (Leek et al., 2011). Furthermore, physical activity levels within organized sport have been found to vary by participant age, gender, sport, and BMI (Katzmarzyk, Walker, & Malina,

2001; Leek et al., 2011; Sacheck et al., 2011). Leek et al. (2011) found that 11-14 year olds were less active than the 7-10 year olds, girls were less active than boys, and those playing baseball/softball were considerably less active than those playing soccer. Katzmarzyk et al. (2001) used time-motional analysis to compare percentages of time spent sitting, standing, walking, jogging, and sprinting in five youth sports: basketball, indoor soccer, outdoor soccer, ice hockey, and in-line hockey. There were significant differences found between sports; for example, the percentage of time spent sprinting was much greater in outdoor soccer than any of the other sports, and indoor soccer players spent less time sitting than basketball, in-line hockey, and ice hockey players (Katzmarzyk et al., 2001). Overweight and obese children (ages 7 -10) in Sacheck et al.'s (2011) study spent more time being sedentary and less time in MVPA during a soccer match than children who were not overweight or obese. Clearly, this is an important area for future research, and any interventions based on sport as a source of physical activity should confirm that participation in that particular sport program will in fact contribute significantly to participants' MVPA.

Benefits of High School Sports

High school sports tend to engage adolescents at a critical time of day. Research suggests that the period of time right after school (usually between 3 and 6 p.m.) may define youth predilection for physical activity (AHKC, 2011; Mota, Santos, Guerra, Ribeiro, and Duarte, 2003). In a year-long study using pedometers, Pelclová, El Ansari, & Vasícková (2010) found that adolescents who regularly attended organized after-school physical activity consistently achieved

more steps per day than those who did not. This held true regardless of the ‘type’ of day; after-school physical activity participants recorded more step counts on days with physical education classes, on days without physical education classes, and also on weekends (Pelclová et al., 2010).

High school sport programming may also remove some potential barriers to participation that are found in club sports. Transportation is not usually an issue, since most sports teams practice right at the school. It is becoming more and more common to find a fully equipped fitness centre as well as more than one gymnasium in a high school and many urban high schools also have swimming pools close by, if not actually attached. Practices are generally held right after classes end, or sometimes before class, so there is no time wasted going home and then coming back for practice. Costs are often considerably lower than for club sports—an important point when considering the impact of household income on physical activity and sport participation (Canadian Heritage, 2013). This is especially true for swimming, where much of the cost of club swimming comes from pool rental fees. The City of Edmonton offers pool time to schools at drastically reduced rates.

High School Swimming

While convenience and low costs may contribute to the successful recruitment of students to high school swim teams, high school swimming in Alberta offers another advantage for less active, less athletic students. Rather than having tryouts and traveling throughout the province for competitions, high school swimming programs in Alberta emphasize inclusion and maximum

participation, with some schools having teams with as many as one hundred swimmers or more.

The purpose of this study was to explore the potential of city? high school swimming programs as an avenue for increasing physical activity and sport commitment in adolescents who are not adequately active, so it is important to determine whether high school swimming actually has a positive impact on physical activity levels. A one hour swim practice may not actually provide one hour of MVPA, but the hope is that it may induce more activity overall, and that previously less active students will continue to be more active once the season ends.

Other Benefits of Sport

Regardless of the potential contribution to physical activity, many studies have described benefits related to participation in organized sport. Sabo, Miller, Melnick, and Heywood (2004) reported that participation in exercise and sport contributed to a more positive body image, higher global self-esteem, and better overall mental health. A recent literature review and meta-analysis also confirmed lower rates of smoking and illicit drug use by adolescent athletes as compared to their peers who did not participate in sport (Diehl et al., 2012). In a six-year longitudinal study, Marsh and Kleitman (2003) found that high school students who participated more in sports, especially extramural sports, had higher grades, higher self-esteem, and higher educational aspirations. Student athletes also spent more time on homework and applied to more universities (Marsh & Kleitman,

2003). Curtis, McTeer, and White (1999) discovered that participation in extramural high school sports predicted sport participation as adults.

Engaging Non-Participants

With so many potential benefits associated with youth sport participation, it is not surprising that attrition and dropout has become an important topic of research. However, Weiss and Chaumeton (1992) caution against liberal use of the term “dropout,” as this term has often been misapplied. Many adolescents who are labeled as “dropouts” actually just transfer from one sport to another, or continue participation in the sport recreationally or at a lower level of competition. Weiss and Chaumeton (1992) instead emphasize the need to first identify true “non-participants.” Those who are not engaged in any sport or physical activity should then be targeted with programming aimed at engaging them in life-long activity, regardless of their level of competence or achievement orientations.

High school swimming in Alberta may prove to be an example of such programming. Swimming, unlike sports such as basketball, badminton, and wrestling, does not fall under the umbrella of the Alberta Schools’ Athletic Association. Instead, swimming is a part of the Metro Edmonton High School Athletic Association and the Calgary Senior High School Athletic Association. This means that while there is local competition between schools, there are no high school swimming competitions between cities or zones in Alberta. Rather than having tryouts and traveling throughout the province for competitions, high

school swimming emphasizes inclusion and maximum participation, attempting to attract students with the fun and social aspects of belonging to a team.

This is consistent with research in the area of participation motivation. Gould, Feltz, and Weiss (1985) conducted a study that looked specifically at participation motivation in youth swimmers, using Gill, Gross, and Huddleston's (1983) participant motivation questionnaire. This 30-item instrument consists of eight dimensions: achievement/status, team-oriented reasons, fitness-oriented reasons, energy release, skills development, friendships, fun, and miscellaneous reasons. Items are rated on a five-point Likert scale. The researchers found that the top three motives for participation were fun, fitness, and team atmosphere, respectively (Gould et al, 1985). These motives for participation appear to be very similar to some of the constructs found in the Sport Commitment Model.

The Sport Commitment Model

The concept of commitment goes beyond participation and signifies persistence, even in the face of adversity. *As sport participation often involves sacrifice and discomfort, even pain, the question of what leads to continued involvement in sport is worthy of discussion.*

In the field of general psychology, Rusbult (1980a, 1980b) went beyond theories of attraction and created an investment model of commitment in romantic and platonic relationships. She hypothesized that increases in investment size, decreases in alternative value, and increases in relationship value should increase commitment to an ongoing relationship. Rusbult identified two primary types of investment. The first type consists of resources that are put directly into the

relationship, such as money, time, and effort. The second type of investment is more indirect, and includes things like mutual friends, shared memories, and shared material possessions (Rusbult, 1980b).

Scanlan, Carpenter, et al. (1993) drew on Rusbult's research as they focused their attention on the motivation underlying continued involvement in sport. Specifically, they defined sport commitment as "a psychological construct representing the desire and resolve to continue sport participation," whether in a particular program, specific sport, or sport in general (Scanlan, Carpenter, et al., 1993). This research resulted in Scanlan, Carpenter, et al.'s (1993) original Sport Commitment Model (SCM), which consists of five factors that are hypothesized to impact sport commitment. Four of the factors are thought to positively impact sport commitment. These include Sport Enjoyment, Social Constraints, Involvement Opportunities, and Personal Investments. The remaining factor, Involvement Alternatives, is thought to impact sport commitment in a negative direction (Scanlan, Carpenter, et al., 1993).

Sport Enjoyment is defined as a positive emotional response to the sport experience, including feelings of pleasure, attraction, and fun (Scanlan, Carpenter, et al., 1993). Social Constraints refers to the expectations of others and perceived social norms that create feelings of obligation to continue participation (Scanlan, Carpenter, et al., 1993). Involvement opportunities might include anticipated benefits such as skill development, recognition, or friendship that only come through continued involvement (Scanlan, Carpenter, et al., 1993). Personal investments are the personal resources, such as time and money, that are put into

the activity and cannot be recovered if participation is discontinued (Scanlan, Carpenter, et al., 1993). Involvement Alternatives refers to opportunities for engagement in another activity (e.g., band or chess club) instead of participating in the sport. When an alternative activity is perceived as very attractive, sport commitment is thought to be negatively impacted (Scanlan, Carpenter, et al., 1993).

Modifications and additions

Modifications to the model resulted in two of the constructs being renamed, as their similarities were causing confusion. “Involvement Opportunities” became “Valuable Opportunities” and “Involvement Alternatives” was changed to “Other Priorities” (Scanlan, Russell, Magyar, & Scanlan, 2009). The definition of Other Priorities was also broadened to include activities of a pressing or demanding nature, regardless of their attractiveness (Scanlan et al., 2009). Quantitative and qualitative testing supported the inclusion of a sixth factor, Social Support (Carpenter, 1992; Scanlan et al., 2009). This is defined as the feeling of being encouraged and supported by others (Scanlan et al., 2009). After further research, Scanlan, Russell, Scanlan, Klunchoo, and Chow (2013) indicated that Social Constraints only strengthens commitment in the absence of perceived personal control, Personal Investments only strengthens commitment when the loss of resources is accepted, and Other Priorities only lessens commitment when these other priorities are perceived as competing with the sport. Otherwise, these constructs do not have any impact on commitment.

Most recently, the completion of the Project on Elite Athlete Commitment (PEAK), uncovered four new candidate commitment sources: Desire to Excel, Team Tradition, Elite Team Membership, and Worthy of Team Membership (Scanlan, Russell, Scanlan, Klunchoo, & Chow, 2013). Desire to Excel is defined as “Wanting or striving to achieve excellence through Master and Social Achievement behaviours” (Scanlan et al., 2013, p. 531). Team Tradition is defined as “The pride and honor associated with being on the elite team that represents one’s country, often combined with a sense of responsibility and desire to maintain best-in-the-world performance” (Scanlan et al., 2013, p. 531). Elite Team Membership refers to “the special status achieved by reaching the pinnacle of one’s sport and the realization that it provides a chance to leave a legacy” (Scanlan et al., 2013, p.532). Finally, Worthy of Team Membership is defined as “Proving that one deserves to be on the team particularly when one’s position is uncertain or in jeopardy” (Scanlan et al., 2013, p. 532). Scanlan et al. (2013) identified Desire to Excel as the only construct that would apply across all levels of competition. However, a broader definition of Team Tradition, “The pride and honour of being a part of a team’s history and the responsibility to maintain that history through high standards of performance and conduct,” (Scanlan et al., 2013, p. 533) could be applicable to athletes at any competitive level, and may even be applicable for athletes competing in individual sports.

Other constructs

Other constructs that have been proposed as additions to the model include perceived costs and perceived competence. Weiss and Weiss (2007) found

perceived costs to have a negative impact on sport commitment, and this effect increased with the age of their participants (competitive gymnasts). This led to the examination of the place of perceived costs in the SCM where Weiss, Weiss, and Amorose (2010) found it to have a significant negative impact on psychological *and* behavioural commitment.

In that same study of young female gymnasts, Weiss et al. (2010) determined that perception of gymnastics ability was not significantly related to psychological commitment. However, perceived competence was moderately correlated with several commitment constructs (0.42 with Sport Enjoyment). This is consistent with the results of a Scanlan et al.'s (2009) qualitative study, which supported the placement of perceived competence as a source of enjoyment in the SCM and not as a direct predictor of commitment.

However, when Choosakul, Vongjaturapat, Li, and Harmer (2009) used a direct/indirect model they found both a direct relationship between perceived competence and sport commitment (0.19) and an indirect relationship, through Sport Enjoyment. The relationship between perceived competence and Sport Enjoyment was 0.17, and the relationship between Sport Enjoyment and sport commitment was measured at 0.27, a stronger relationship with sport commitment than any other construct.

Enjoyment as a mediating variable

The importance of enjoyment as a construct for sport commitment has led several researchers to investigate the possibility of an enjoyment-mediated model of sport commitment. Weiss, Kimmel, and Smith (2001) hypothesized that

Personal Investments, Social Support, and perceived competence would positively relate to enjoyment, Attractive Alternatives and Social Constraints would negatively relate to enjoyment, and that enjoyment would positively predict sport commitment in junior tennis players. Their results supported both the original model and their newly proposed model, but the strongest support was found for an alternative model that specified both direct and indirect effects through enjoyment on commitment.

Casper, Gray, and Stellino (2007) set out to test this direct/indirect model in a population of adult recreational tennis players. They found that both models demonstrated an acceptable fit to the data, but the original model was superior, explaining 98% of the variance in commitment. However, Casper et al. (2007) maintained that the direct/indirect model should not be discarded, as it revealed the importance of two constructs, Involvement Alternatives and Social Constraints, which was not evident in the original model. These constructs were found to be significant indicators of decreased enjoyment, which is of course the strongest predictor of commitment.

Other researchers tested the original model, the enjoyment-mediated model, and a direct/indirect model within a population of Thai youth athletes (Choosakul et al., 2009). All three models fit the data reasonably well, with the direct/indirect model performing much better than the mediational model (Choosakul et al., 2009). While Scanlan et al.'s (2009) qualitative research did not support a mediational model, they did suggest that one construct, Valuable

Opportunities, may have both direct and indirect (through enjoyment) effects on sport commitment.

Impact of age, skill level, and gender

Just as Gould et al. (1985) found differences between the participation motives of older and younger swimmers, Weiss and Weiss (2007) found differences between the determinants of sport commitment in gymnasts based on age and level of competition. Their results contradict those of Carpenter and Scanlan (1993), who found no significant interaction effects based on age and gender in an adolescent sample of athletes, and Carpenter and Coleman (1998), who tested the model on non-elite athletes and found no differences between athletes of varying skill levels. In two more recent studies, significant differences were found in the determinants of adult tennis players' sport commitment based on participants' age, gender, and skill level (Casper & Stellino, 2008; Casper & Andrew, 2008). Clearly, the examination for differences by grade, gender, and swimming experience is warranted in the present study.

Impact of psychological commitment on behaviour

It is reasonable to expect that psychological commitment will, in turn, determine behavioural commitment, but very few studies have actually extended and tested the model in this way. Casper et al. (2007) examined the association between psychological commitment and behavioural commitment in adult recreational tennis players, where behavioural commitment was characterized by frequency of participation in tennis and the amount of money they were willing to spend on tennis-related product. He found that the model explained 98% of the

variance in commitment, and that psychological commitment accounted for 16% of participation frequency and 18% of purchase intention (Casper et al., 2007).

When Weiss et al. (2010) tested an expanded model with female gymnasts, they had coaches rate each of their athletes' effort, intensity, perseverance in response to mistakes, persistence under adverse conditions, and energy in practice sessions, as a measure of behavioural commitment. Surprisingly, in their path analysis there was essentially no relationship between psychological commitment and behavioural commitment. One possible reason for this may have been that those types of behaviour are not the ones that best differentiate athletes' level of psychological commitment, especially in such a homogenous group where these traits are encouraged and expected (Weiss et al., 2010). In a more casual program with lower expectations, there may be greater differentiation in the behaviours of more and less committed athletes.

Chapter 3: Purpose and Research Design

The purpose of this study was to explore the potential of high school swimming programs as an avenue for increasing physical activity and sport commitment in adolescents who are not adequately active. The research site was a local high school swim program, chosen for its stability, longevity, and well known history of success in attracting large numbers of participants (both male and female) each year. The research proceeded in two phases, with the first phase utilizing a longitudinal research design with questionnaires as the instrument for data collection. Quantitative methods such as questionnaires enable a researcher to collect large amounts of data efficiently. The larger sample sizes afforded by quantitative methods allow for comparisons between groups (such as males and females, or age groups) and for greater generalizability of results.

In Phase One, I used the longitudinal research design to examine changes in physical activity over time, administering the same physical activity questionnaire to all participants prior to the start of the high school swim season (Time 1), during the season (Time 2), and after the season ended (Time 3). I also used questionnaires to gather demographic information and data pertaining to participants' sport commitment. The sport commitment questionnaire was administered towards the end of the high school swimming season, and participants were asked to reflect on their entire high school swimming experience, from when they first joined the team until the present, in order to attain a more stable estimate of commitment (Carpenter, 1992). The physical

activity questionnaires, demographic questionnaire and sport commitment questionnaire comprise Phase One.

In order to further explore students' experiences within the high school swimming program, I also collected qualitative data, conducting semi-structured personal interviews with eight participants during the swim season. These interviews comprise Phase Two of my study. In these interviews, participants were able to describe their sources of sport commitment in their own words as I attempted to gain a sense of how these sources of commitment might interact. This use of mixed methods also allowed for triangulation of data sources, adding to the credibility of my findings on sport commitment in high school swimmers. The timeline for both phases of the study can be seen in Figure 1.

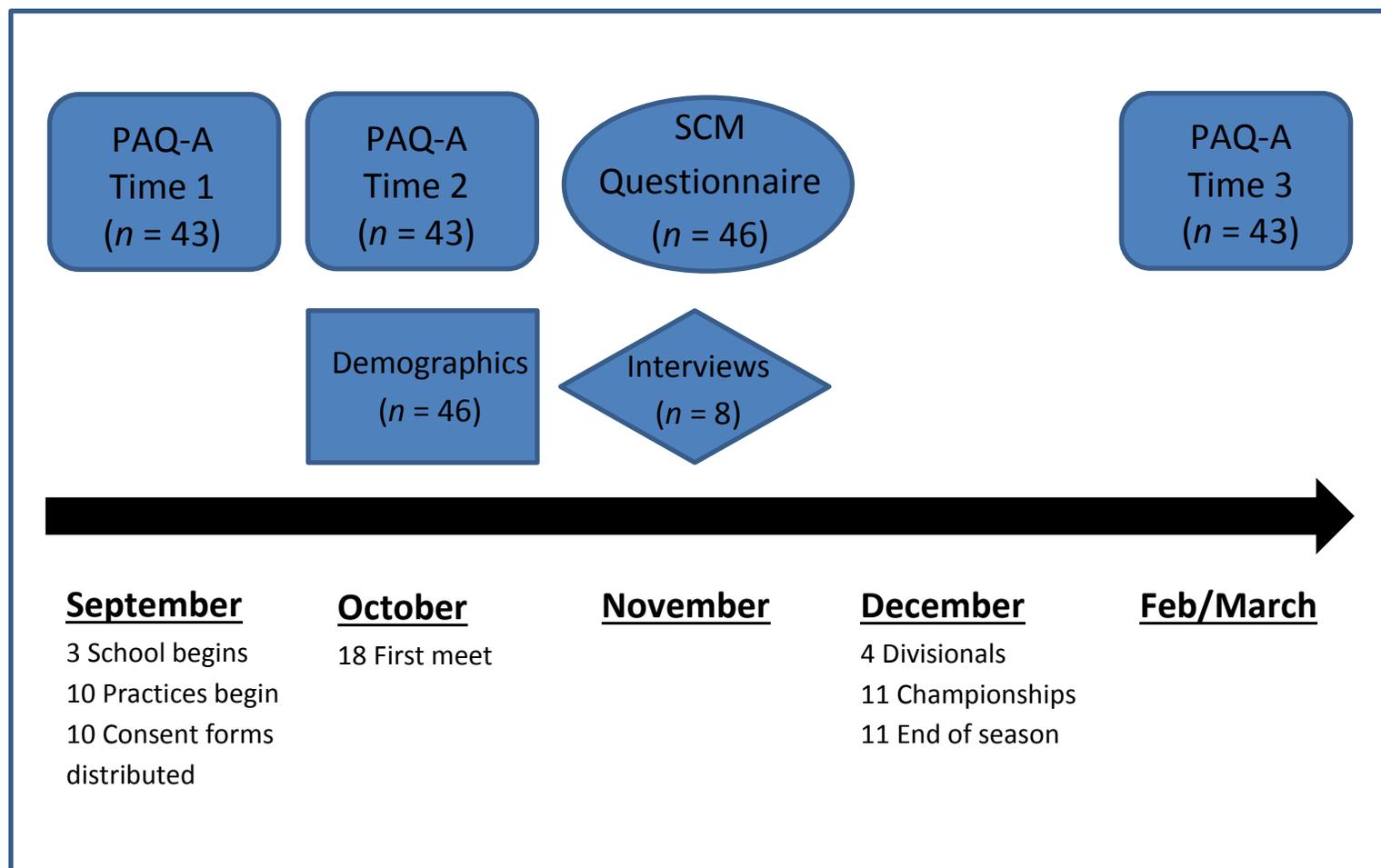


Figure 1. Timeline with study design.

Chapter 4: Method

Participants:

One local high school swim team (hereafter referred to as the “Parkside Panthers”) is known for its successful recruitment of students, and participants on the team have numbered close to 200 some years. The size of this team and the cooperation of their head coach and school principal made it an appealing subject for study. A total of 46 students on the Parkside Panthers swim team completed a demographic questionnaire, sport commitment questionnaire, and at least two of three physical activity questionnaires. When I informed the team that I was looking for participants for interviews, especially those who didn’t have prior experience with competitive swimming, or those who were on the team for their second or third season, eight of my original participants volunteered and were interviewed using the Scanlan Collaborative Interview Method.

Phase One Hypotheses:

Primary Hypothesis 1: Physical activity will increase from Time 1 to Time 2. Physical activity will decrease from Time 2 to Time 3, but will not drop below levels at Time 1.

Sub Hypothesis 1.1: Females will have lower physical activity levels than males at all three time points, but the pattern of change over time will not differ significantly by gender.

Sub Hypothesis 1.2: Participants in Grade 10 will have the highest physical activity at all three time points and participants in Grade 12 will

have the lowest physical activity levels at all three time points, but the pattern of change over time will not differ significantly by grade.

Sub Hypothesis 1.3: Participants who are less active at Time 1 will have a more pronounced increase in physical activity from Time 1 to Time 2 compared to participants who are more active at Time 1. Physical activity will decrease from Time 2 to Time 3, but will not drop below levels at Time 1.

Primary Hypothesis 2: Commitment to high school swimming will be positively related to physical activity levels at Time 2 and Time 3.

Sub Hypothesis 2.1: There will not be any significant differences in the relationship between commitment to high school swimming and physical activity levels at Time 2 and Time 3 by gender, grade, or initial physical activity.

Primary Hypothesis 3:

- a. Sport Enjoyment will be positively related to sport commitment.
- b. Other Priorities will be negatively related to sport commitment.
- c. Social Constraints will not be related to sport commitment.
- d. Valuable Opportunities will be positively related to sport commitment.
- e. Personal Investments will be positively related to sport commitment.
- f. Social Support will be positively related to sport commitment.

Sub Hypothesis 3.1: There will not be any significant differences in the relationship between these constructs and sport commitment by gender, grade, initial physical activity, or competitive swimming experience.

Phase One Instruments:

Physical Activity Questionnaire for Adolescents

Participants' physical activity levels were measured at three different times—pre-season (September), mid-season (November), and post-season (February/March), using Kowalski, Crocker, and Kowalski's (1997) Physical Activity Questionnaire for Adolescents (PAQ-A). This is a 7-day recall questionnaire based on Kowalski, Crocker, and Faulkner's (1997) Physical Activity Questionnaire for Older Children. It consists of nine items, eight of which are used in calculating a total physical activity score. Tests of the PAQ-A have confirmed its reliability and validity (Kowalski et al., 1997; Booth, Okely, Chey, & Bauman, 2002).

Demographic questionnaire

In addition to age, grade, sex, and ethnicity, participants were asked about their past involvement with the high school swim team, past competitive swimming experience, and also about any current involvement in aquatic activities, such as competitive swimming (with a club), synchronized swimming, diving, or water polo.

Sport commitment questionnaire modified for swimmers

Items were drawn from questionnaires used by Carpenter (1992), Scanlan, Simons, Carpenter, Schmidt, and Keeler (1993), and Huckleberry (2011). It

measures seven constructs: commitment (at a sport level and team level), sport enjoyment, personal investments, social constraints, involvement opportunities, involvement alternatives, and social support. Most of the items were phrased as statements, as Carpenter and Coleman (1998) felt these were better understood than questions. Response options for each item were presented on a 5-point Likert-type scale with 1 representing a low rating and 5 representing a high rating.

Phase One Procedure:

Data collection for this study began in September 2013 and ended in March 2014. Swim practices began on September 10th, the first meet was on October 18th, and the season culminated in the City Championship meet on December 11th. I attended about 90% of the swim team practices so that I could personally distribute the information letters and parental consent forms, beginning on September 10th, and administer all questionnaires. Any swim team members who brought back signed consent forms were considered eligible for the study, and were immediately given the first physical activity questionnaire. All questionnaires were administered on the pool deck, before, during, or after practices, according to the coaches' and swimmers' preferences.

The first questionnaire was intended to measure participants' physical activity in the week prior to the start of practices, so I gave them a visual aid—a calendar that highlighted the pertinent week and showed Labour Day, the first day of school, and the first day of swim practices—in hopes that this might prompt more accurate recollections. There was no set cut-off date for joining the team, and I had new participants join the study as late as November, but these later

participants did not complete the first questionnaire, as it would be highly unlikely that they could remember their activities from so far back.

In October, I collected demographic information. In November, I administered the second physical activity questionnaire (dealing with their past seven days—much easier to remember than what?) and the sport commitment questionnaire. I tried to avoid administering the physical activity questionnaires around holidays like Thanksgiving and Remembrance Day, when their regular routines would be interrupted. I also wanted participants to have the chance to attend a few meets before completing the sport commitment questionnaire, as meets provide a very different experience compared to practices.

The final physical activity questionnaire was administered over February and March. Some participants completed it by the pool after school, as they were participating in a new long-distance swim club. Most participants completed it during lunch hour at the school in the student services centre, as they had no reason to go to the pool. Again, this questionnaire asked them to recall their physical activity from the last seven days.

Phase One Analysis:

After collection, all data were cleaned and edited. Data were screened for scores that fell outside the possible range of responses by examining the range of scores, along with box-plots and histograms, and all scores fell within their expected measurement scales. Continuous data are presented as mean (standard deviation) or mean \pm 95% CI (confidence interval), and categorical data are presented as number (%).

Considering responses for each item on a 5-point Likert scale, a set of physical activity and sport/team commitment indicators was identified and a rank assigned for each indicator from 1 (*Strongly Disagree*) to 5 (*Strongly Agree*). As the proposed scale had established intervals with specific relative placement on the scale, it was possible to locate change as a point along a continuum and convert an ordinal scale into an interval scale (Baker, Hardyck, & Petrinovich, 1966; Knapp, 1990; Labovitz, 1967). For the PAQ-A, scores for items 1 and 8 were computed by calculating the mean, and then the mean score was computed for all eight questions, resulting in a total score falling between 1 and 5 where a higher score means higher physical activity level. Voss, Ogunleye, and Sandercock (2013) identified PAQ-A scores of 2.9 and 2.7 as indicators of sufficient physical activity for boys and girls, respectively.

Next, the internal consistency of items measuring each construct of the Sport Commitment Model was evaluated through Cronbach's alpha measure of reliability. Results indicated favorable internal consistency for items designated for commitment to the Parkside swim team (.84), Sport Enjoyment (.90), Other Priorities (.84), and Social Constraints (.78). Initial results for Personal Investments (.64) and Valuable Opportunities (.67) were not ideal; however, removing the item about money invested and the item about missing the head coach resulted in some improvement (to .69 and .73, respectively). The scale for Social Support did not have sufficient reliability and was excluded from future analyses.

Hypotheses guided the analysis, which included descriptive statistics, repeated measures ANOVA, t-tests, Pearson product-moment correlations, and multiple regression. Repeated measures analysis of variance (ANOVA) with a Greenhouse-Geisser correction was used to determine the significance of the differences among the mean values between different time points. Bonferroni post hoc tests were used to identify significant pair-wise comparisons when overall ANOVA F-values were significant. T-tests identified significant differences between values. Correlations between continuous data were assessed using the Pearson product-moment correlation coefficient (r). Multiple regression was used to create a predictive model of sport commitment. Missing data for all characteristics were less than 5%. Details about each analysis and corresponding results can be found in the quantitative results section. All significant values were defined by $p < 0.05$. All analyses were conducted using Statistical Package for the Social Sciences (SPSS) version 21.0.

Phase Two Research Questions:

- 1) What are the determinants of students' commitment to their high school swim team?
- 2) Can participation on a high school swim team foster commitment to the sport of swimming, for those who are new to the sport?

Phase Two Procedure:

I conducted the interviews late in the season so as to have the chance to build some rapport with the swimmers. These were scheduled according to the availability of interested participants and took place over the last week of

November, with two interviews per day—one in the morning, and one in the afternoon. The interviews were conducted in the “party room” just off the pool deck, which was fairly quiet and free from interruptions. The room contained chairs and a large table, which accommodated the interaction and visual aids used in the Scanlan Collaborative Interview Method. The duration of the interviews ranged from 27 minutes to 51 minutes, with a mean time of 38 minutes. In preparation for these interviews, I took a class on qualitative research methods, read through all materials written on the Scanlan Collaborative Interview Method, and conducted several practice interviews.

Scanlan Collaborative Interview Method

Tara Scanlan is a proponent of mixed method approaches to the study of sport commitment (Scanlan, 2011). In addition to developing quantitative scales and measures, Scanlan and her colleagues created an innovative tool for qualitative research. The Scanlan Collaborative Interview Method (SCIM) was created so as to be capable of testing hypothesized relationships within the Sport Commitment Model, and also exploring underlying mechanisms of commitment (Scanlan, Russell, Wilson, & Scanlan, 2003).

The first step in the SCIM is for the researcher and participant to mutually establish a definition of commitment (Scanlan et al., 2003). Second, the participant identifies and discusses his or her personal sources of commitment. In the third step, the interviewer systematically offers up commitment sources from the Sport Commitment Model and the participant decides whether he or she

experiences that source, and whether it is distinct from the already identified sources (Scanlan et al., 2003).

A visual display of the participant's "commitment picture" is formed on a board, where construct cards are added or removed as the participant decides whether or not they are relevant to his or her personal sport commitment. The positive and negative relationships between the constructs and sport commitment are also indicated on the board, as some constructs will strengthen a participant's commitment and others may weaken it (Scanlan et al., 2003).

Model testing was beyond the scope of this study, but the SCIM presented a structured and interactive guide to exploring the determinants of sport commitment in high school swimmers. Scanlan's use of the SCIM with elite athletes led to a better understanding of the operation of constructs and differentiation of types within the constructs. Furthermore, the athletes appreciated seeing a visual representation of their personal sources of commitment (Scanlan et al., 2003).

Phase Two Analysis:

Qualitative analysis was conducted first, so as to avoid being influenced by the results of the quantitative analysis. Interviews took place over a very short period of time, one week, so it wasn't possible to complete an analysis of one interview before conducting the next. However, immediately after each interview, I recorded my thoughts, ideas, and reflections in a reflexive journal, as recommended by Lincoln and Guba (1985). I also played back the audio recording in the hours following each interview to get a sense of what was being

said, and to see how my interviewing technique might be improved. I transcribed (verbatim) all of the interviews myself, which allowed for further familiarization with the data.

In my analysis, I followed the general process used by Scanlan et al. (2013), which is consistent with that described by Patton (2002), moving from an inductive analysis to a deductive analysis. First, all of the transcripts were read through several times and notes were made in the margins as themes appeared, including, but not limited to, constructs from the Sport Commitment Model. Next, my deductive analysis was conducted, looking for data that fit into any of the chosen eight constructs of sport commitment. This was first done with a complete copy of the transcripts, using coloured pencils to highlight the different constructs. Then it was done again by cutting out quotes and sorting them into the different construct categories. Any difficulties in coding were resolved with help from my supervisor. Finally, any remaining data was examined for its significance to sport commitment.

Chapter 5: Results

Participants:

Participants ranged in age from 14 to 17 years ($M = 15.89$; $SD = 0.88$). Twenty-three (50%) of the participants were female: nine in Grade 10, eight in Grade 11, and six in Grade 12. Of the males, five were in Grade 10, nine were in Grade 11, and nine were in Grade 12. Participants identified their ethnicity as being White (72%), Asian (11%), Black (4%), and Indian (4%). Additionally, 9% of participants selected more than one ethnicity (White/Hispanic, White/Asian, or White/Hispanic/Asian).

Phase One Results:

Although the qualitative analysis was conducted before the statistical analysis, I have chosen to present the quantitative results first. They provide a framework for looking at the qualitative results, which give more detailed information regarding participants' sources of commitment.

Primary Hypothesis 1: Physical activity will increase from Time 1 to Time 2.

Physical activity will decrease from Time 2 to Time 3, but will not drop below levels at Time 1.

Testing this hypothesis required comparison of physical activity levels (measured with the PAQ-A) from pre-season (Time 1), to mid-season (Time 2), and post-season (Time 3). A repeated measures ANOVA with a Greenhouse-Geisser correction determined that mean PAQ-A scores did not differ statistically significantly between Time 1, Time 2, and Time 3 for the group as a whole. Table 1?

Sub Hypothesis 1.1: Females will have lower physical activity levels than males at all three time points, but the pattern of change over time will not differ significantly by gender.

The same process was used to test this hypothesis and again, there were no significant differences in physical activity over time for males or females.

Contrary to the hypothesis, t-tests did not find any significant differences between males and females in the mean physical activity scores at each time point.

Sub Hypothesis 1.2: Participants in Grade 10 will have the highest physical activity at all three time points and participants in Grade 12 will have the lowest physical activity levels at all three time points, but the pattern of change over time will not differ significantly by grade.

A repeated measures ANOVA with a Greenhouse-Geisser correction determined that mean PAQ-A scores did not differ statistically significantly between Time 1, Time 2, and Time 3 for participants in Grade 10, Grade 11, or Grade 12. Grade 10 participants had the highest PAQ-A scores at each time point, but it was only at Time 3 that this difference approached significance when compared to Grade 11 ($p = .0732$) and was statistically significant compared to Grade 12 ($p = .0034$). Means, standard deviations, and ANOVA results by gender and grade are displayed in Table 1.

Table 1

Means, Standard Deviations, and Analysis of Variance for PAQ-A scores over Time by Gender and Grade

	<i>n</i>	Time 1		Time 2		Time 3		<i>F</i>	<i>df</i>	<i>p</i>
		<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>			
Male	22	2.48	0.77	2.51	0.57	2.55	0.50	0.125	1.68, 35	.847
Female	21	2.52	0.75	2.48	0.67	2.39	0.67	0.744	1.64, 32.9	.482
Grade 10	12	2.73	0.80	2.62	0.64	2.83	0.47	0.659	1.35, 14.9	.474
Grade 11	17	2.48	0.78	2.50	0.73	2.42	0.65	0.276	1.68, 26.9	.723
Grade 12	14	2.32	0.67	2.37	0.43	2.23	0.47	0.145	1.73, 22.5	.568
Total	43	2.50	0.75	2.49	0.61	2.47	0.58	0.071	1.79, 75.3	.915

Sub Hypothesis 1.3: Participants who are less active at Time 1 will have a more pronounced increase in physical activity from Time 1 to Time 2 compared to participants who are more active at Time 1. Physical activity will decrease from Time 2 to Time 3, but will not drop below levels at Time 1.

To test this hypothesis, participants were stratified into two subgroups based on their initial physical activity level. The PAQ-A mean at Time 1 was 2.53 ($SD = 0.75$) and the median was 2.47. Based on these statistics, participants with PAQ-A scores greater than 2.47 at Time 1 were put into a high physical activity subgroup, and those with scores less than 2.47 at Time 1 were put into a low physical activity subgroup.

A repeated measures ANOVA with a Greenhouse-Geisser correction determined that mean PAQ-A scores differed statistically significantly between time points in both the high and low physical activity subgroups, $F(1.91; 38.25) = 4.26, p = .023$; $F(1.67; 35.1) = 3.74, p = .041$). Post hoc tests using the Bonferroni correction revealed a reduction in PAQ-A scores in the high physical activity subgroup from Time 1 to Time 3 ($M = 3.15, SD = 0.40$; $M = 2.84, SD = 0.50$), which was statistically significant ($p = .022$).

The opposite dynamic was observed in the low PA subgroup where there was an increase in PAQ-A scores from Time 1 to Time 3 ($M = 1.88, SD = 0.39$; $M = 2.12, SD = 0.42$); however, these changes were not significant ($p = .115$). There were also no significant changes in relation to the mid-season time point for either subgroup. The PAQ-A score means, standard deviations, and ANOVA results for these high and low activity subgroups are displayed in Table 2.

Table 2

Means, Standard Deviations, and Analysis of Variance for PAQ-A scores over Time by Initial PA Level

	<i>n</i>	Time 1		Time 2		Time 3		<i>F</i>	<i>df</i>	<i>p</i>
		<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>			
Low PA	22	1.88	0.39	2.12	0.41	2.12	0.42	3.74	1.67, 35.1	.041
High PA	21	3.15	0.40	2.88	0.54	2.84	0.50	4.26	1.91, 38.3	.023
Total	43	2.50	0.75	2.49	0.61	2.47	0.58	0.07	1.79, 75.3	.915

These results were supported by t-tests performed within the two subgroups to compare PAQ-A scores at different time points. Among students who belonged to high physical activity subgroup there was a significant reduction in physical activity from Time 1 ($M = 3.15$, $SD = 0.40$) to Time 3, ($M = 2.84$, $SD = 0.50$), $p = .032$. Conversely, in the low physical activity subgroup there were improvements in physical activity level from Time 1 ($M = 1.88$, $SD = 0.39$) to Time 2 ($M = 2.12$, $SD = 0.41$) and from Time 1 to Time 3 ($M = 2.12$, $SD = 0.42$) that approached significance, $p = .056$, and $p = .053$, respectively.

To explore these changes further, the high and low physical activity subgroups were divided by gender. A repeated measures ANOVA with a Greenhouse-Geisser correction showed a significant increase in the PAQ-A scores of low physical activity males from Time 1 to Time 3, and the increase from Time 1 to Time 2 approached significance. T-tests confirmed that there was a significant difference between Time 1 and Time 3, $p = .03$, and also between Time 1 and Time 2, $p = .01$. There were no significant changes over time for high physical activity males or low and high physical activity females. Table 3 displays the PAQ-A score means, standard deviations, and ANOVA results over time for each of these initial physical activity/gender subcategories.

Table 3

Means, Standard Deviations, and Analysis of Variance for PAQ-A scores over Time by Initial Physical Activity/Gender Subcategories.

Initial PA	Gender	<i>n</i>	Time 1		Time 2		Time 3		<i>F</i>	<i>df</i>	<i>p</i>
			<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>			
Low PA	Male	13	1.94	0.40	2.30	0.29	2.27	0.32	5.58	1.77, 21.2	.014
	Female	9	1.81	0.40	1.85	0.41	1.89	0.46	0.14	1.52, 12.1	.815
High PA	Male	9	3.28	0.36	2.80	0.75	2.94	0.45	3.32	1.57, 12.6	.078
	Female	12	3.05	0.43	2.95	0.35	2.77	0.54	2.25	1.76, 19.4	.137

Primary Hypothesis 2: Commitment to high school swimming will be positively related to physical activity levels at Time 2 and Time 3.

The correlations computed contradicted this hypothesis. There was no significant relationship between commitment to high school swimming and physical activity at Time 2 or Time 3.

Sub Hypothesis 2.1: There will not be any significant differences in the relationship between commitment to high school swimming and physical activity levels at Time 2 and Time 3 by gender, grade, or initial physical activity.

Again, there were no significant relationships found between commitment to high school swimming and physical activity at Time 2 or Time 3, with one exception: For participants in Grade 12, there was a significant, positive relationship between sport commitment and physical activity at Time 3 ($r = .654$, $p = .05$)

Primary Hypothesis 3:

- a. Sport Enjoyment will be positively related to sport commitment.*
- b. Other Priorities will be negatively related to sport commitment.*
- c. Social Constraints will not be related to sport commitment.*
- d. Valuable Opportunities will be positively related to sport commitment.*
- e. Personal Investments will be positively related to sport commitment.*
- f. Social Support will be positively related to sport commitment.*

Sub Hypothesis 3.1: There will not be any significant differences in the relationship between these constructs and sport commitment by gender, grade, initial physical activity, or competitive swimming experience.

The means and standard deviations for commitment to Parkside, Sport Enjoyment, Other Priorities, Social Constraints, Valuable Opportunities and Personal Investments are displayed in Table 4 by gender, grade, initial activity level, and prior competitive swimming experience.

T-tests determined that there was a statistically significant difference for Personal Investments by gender and grade, and Other Priorities also differed by grade. The difference between Grade 10 and Grade 12 for commitment and Sport Enjoyment approached significance. There were no significant differences by initial physical activity level or prior experience.

Table 4

Means and Standard Deviations for Sport Commitment Constructs by Gender, Grade, Initial Physical Activity, and Prior Competitive Swimming Experience

	<i>n</i>	Commitment		SE		OP		SC		VO		PI	
		<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Male	23	4.41	0.50	4.67	0.51	2.55	0.69	1.84	0.63	4.38	0.55	4.24*	0.60
Female	23	4.45	0.50	4.58	0.49	2.37	0.64	2.00	0.67	4.49	0.52	3.62*	0.54
Grade 10	14	4.26	0.45	4.45	0.52	2.81*	0.56	2.09	0.74	4.36	0.55	3.55*	0.42
Grade 11	17	4.46	0.59	4.63	0.54	2.44	0.75	1.86	0.57	4.31	0.59	3.94*	0.57
Grade 12	15	4.56	0.37	4.78	0.38	2.16*	0.50	1.84	0.66	4.64	0.41	4.32*	0.72
Low PA	22	4.42	0.48	4.55	0.60	2.49	0.69	1.97	0.70	4.48	0.55	4.09	0.63
High PA	22	4.45	0.53	4.61	0.49	2.46	0.67	1.86	0.57	4.36	0.53	3.84	0.61
Prior Exp.	26	4.49	0.51	4.60	0.51	2.40	0.67	1.92	0.69	4.46	0.50	3.99	0.63
No Prior Exp.	20	4.66	0.49	2.54	0.67	1.92	0.62	1.92	0.62	4.40	0.59	3.94	0.65
Total Sample	46	4.43	0.49	4.63	0.49	2.46	0.66	1.92	0.65	4.43	0.53	3.94	0.65

* Difference is significant at the 0.05 level (2-tailed).

Correlations were computed for commitment, Sport Enjoyment, Other Priorities, Social Constraints, Valuable Opportunities, and Personal Investments. Results for the group as a whole are displayed in Table 5. As hypothesized, Sport Enjoyment, Valuable Opportunities, and Personal Investments were significantly and positively related to commitment. Social Constraints was not significantly related to commitment, and Other Priorities had a significant negative relationship to commitment.

Contrary to sub hypothesis 3.1, some differences appeared when correlations were computed by gender and grade. Other Priorities had a significant negative relationship with commitment for males, but not for females. Personal Investments had a significant positive relationship with commitment for participants in Grade 11, but not for those in Grade 10 or Grade 12. For participants in Grade 12, none of the variables were significantly related to commitment.

Other Priorities had a significant negative relationship with commitment for participants in the low activity subgroup, but not for those in the high activity subgroup. Other Priorities also had a significant negative relationship with commitment for participants with prior competitive swimming experience, but not for those without prior experience. Personal Investments had a significant positive relationship with commitment for participants without prior competitive swimming experience, but not for those with prior experience.

Table 5

Correlations between Commitment and Sport Commitment Model Constructs

		Commitment	SE	OP	SC	VO	PI
Commitment	<i>r</i>	1	.607**	-.441**	-.141	.539**	.409**
	<i>n</i>	45	45	45	45	45	44
Sport Enjoyment	<i>r</i>	.607**	1	-.387**	-.218	.639**	.470**
	<i>n</i>	45	46	46	46	46	44
Other Priorities	<i>r</i>	-.441**	-.387**	1	.168	-.244	-.328*
	<i>n</i>	45	46	46	46	46	44
Social Constraints	<i>r</i>	-.141	-.218	.168	1	-.047	-.118
	<i>n</i>	45	46	46	46	46	44
Valuable Opportunities	<i>r</i>	.539**	.639**	-.244	-.047	1	.460**
	<i>n</i>	45	46	46	46	46	44
Personal Investments	<i>r</i>	.409**	.470**	-.328*	-.118	.460**	1
	<i>n</i>	44	44	44	44	44	44

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

A multiple regression was run to predict commitment from Sport Enjoyment, Other Priorities, Valuable Opportunities, and Personal Investments. These variables statistically significantly predicted commitment, $F(4, 39) = 8.43, p < .0005, R^2 = .46$. The resulting model is displayed in Figure 2. Only Sport Enjoyment added significantly to the prediction, $p < .05$. However, these results should be interpreted with caution due to some signs of multicollinearity.

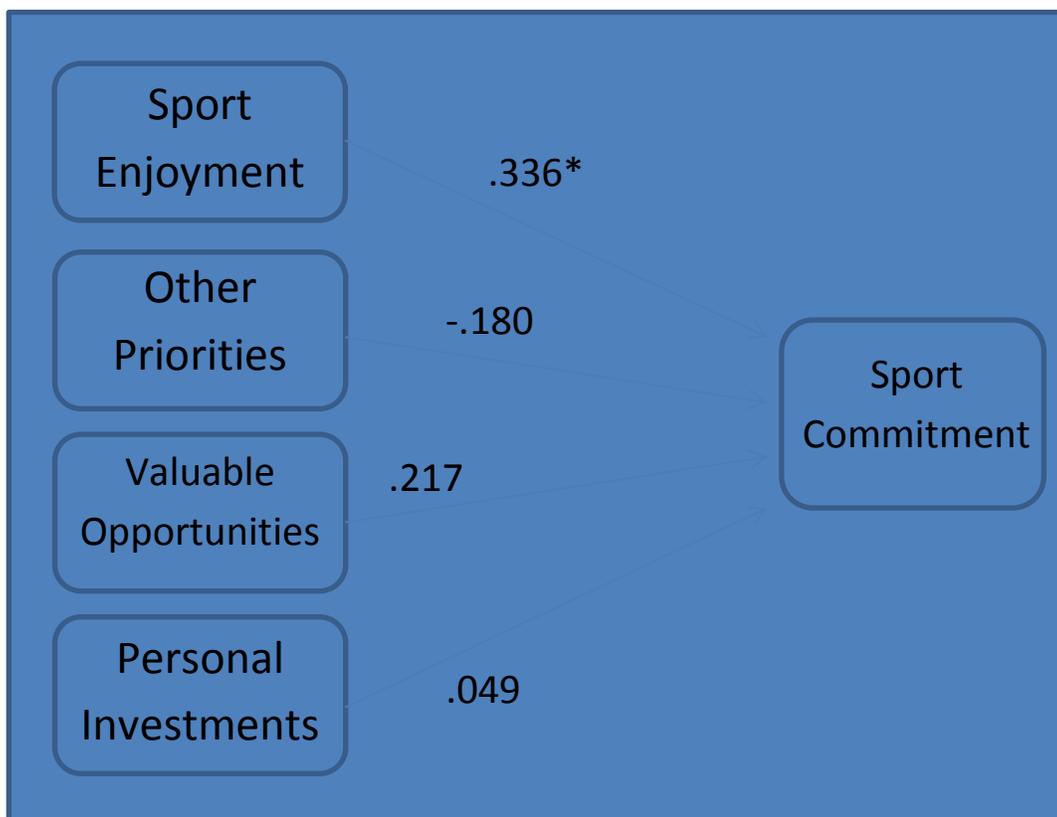


Figure 2. Predictive model of sport commitment.

Social Support was examined separately using the individual items since they did not hold together as a scale, and the descriptive statistics for these items can be found in Table 6. Once again, some significant differences emerged by gender and grade, but not by initial physical activity level or prior competitive swimming experience. When high and low activity subgroups were further divided by gender, the only significant difference that emerged was that high activity females indicated that they experienced more maternal support than high activity males, which was the same difference that emerged for gender overall, $M = 4.68, SD = 0.48; M = 4.26, SD = 0.69, p = .022$.

Differences by grade appeared for friend support, with participants in Grade 12 ($M = 4.47, SD = 0.64$) rating this much higher than participants in Grade 10 ($M = 3.86, SD = 0.66$) or Grade 11 ($M = 3.63, SD = 1.15$), $p = .001$ and $.056$, respectively. Participants in Grade 12 also rated teammate support ($M = 5.00, SD = 0.00$) significantly higher than participants in Grade 11, $M = 4.56, SD = 0.63, p < .001$.

Table 6

Means and Standard Deviations for Social Support Items

	<i>N</i>	<i>M</i>	<i>SD</i>
Friends are supportive	45	3.98	.917
Mom is supportive	45	4.47	.625
Dad is supportive	45	4.22	.850
Teammates are supportive	45	4.80	.457
Head coach is supportive	45	4.78	.420

Phase Two Results:

The purpose of the qualitative phase of this study was to obtain a fuller understanding of the determinants of students' commitment to their swim team, and also to examine the determinants of participants' commitment to the sport of swimming in order to understand how high school swimming might encourage commitment to the sport and hopefully life-long participation.

Results are presented here in the format used by Scanlan et al. (2009). Each data figure displays the construct name, a participant's quote representing the construct, the definition of the construct that was used in the interviews, the hypothesized relationship between the construct and sport commitment, any lead-up questions that were used for the specific construct, and quantitative data around the construct's derivation and effect on commitment. From left to right, the numbers represent the percentage of participants who experienced the construct, the derivation of the commitment effect, and the direction of the effect.

Derivation refers to whether the construct was brought up by the participant first, unprompted; or acknowledged by the participant after having it introduced on a construct card. Confirmation means that the participants confirmed that one or more of their unprompted sources of commitment were the same as the construct on the card. The direction of the effect indicates whether participants found that the construct strengthened their commitment, lessened their commitment, or had no effect on their commitment.

Personal Investments and commitment to team

Parkside: Investing Personal Resources N=8 (Personal Investments)					
“Um...definitely the amount of money that [you] put in kinda helps you stay if you know, like, I put money towards it, you wanna get your money’s worth out of it as well, in a way. Just being honest.” – Tyler					
Definition	The personal resources you may have put into swimming with the Parkside Panthers that you can’t recover or get back if you leave.				
Hypothesized Relationship	Investing personal resources strengthens commitment.				
Lead Up Question	Can you think of anything you’ve put into it, like that?				
Invest Personal Resources (N=7)	Derivation of Commitment Effect		Direction of Commitment Effect		
	Swimmer	Construct	Strengthen	Lessen	None
87.5% (7)	25% (2) Confirmed	62.5% (5) 100% (2 of 2)	37.5% (3)	0% (0)	62.5% (5)

Figure 3. Personal Investments and commitment to team.

Seven participants confirmed that they had made investments, such as time and money, but only three participants found these investments to have an effect on their commitment. Two of these three participants mentioned money on their own, unprompted. Tyler expanded on his statement displayed in Figure 3, saying, “Yeah, it’s just, like, I don’t know, you want the hoody, you want the shirt, you want the trunks, you know, you want everything, so it keeps you coming back, knowing that you spent the money on the team.” Neil linked his personal investment of money to his desire to stay fit, as evidenced in this exchange:

I: So tell me more about how staying fit, um, impacts your commitment?

P: Um, well, once like, you pay a hundred bucks to join, um, it's not, yeah, but, like that's a fair bit of money, so you don't want to pay and then not come, I guess. Like, this has nothing to do with staying fit, but, um, uh...

I: We can add that on there, because that is something, so the money that you've put in.

P: Yeah. But uh, staying fit, I'm pretty lazy at home and that's where the money thing is, like I pay it, and then that makes me come, I guess.

I: Mmm hmm.

P: Um, yeah, like at home, I'd say "Oh, yeah, I'm gonna go to the gym and work out" and I end up not doing anything at all, so, yeah.

I: Ok. So you value staying fit...

P: Mmm hmm.

I: And by paying the money...

P: It makes me stay. Yeah.

While Peter mentioned time as a personal investment, he also referred to food and "swimming stuff" purchased by his parents. He noted that swimming made him eat more and that his dad didn't like it when he emptied the fridge. He affirmed that personal investments strengthened his commitment, saying, "Cause my mom buys me some like, swimming stuff and then she expects me to use it." However, this reason may be more in line with Feeling Obligated (Social Constraints).

Kris rejected Personal Investments as a valid source of commitment, and brought up the issue of "have to" versus "want to:"

Not really, because that's, that's sort of something you knew going in. You can't—if you're going to be committed only by, “Oh, I have to go,” or “I put money into it,” you're not really going for the sake of yourself; you're going just because the sake that you have something in there, so that's not a true [commitment], that's sort of “I have to.”

However, later on in the interview, talking about his first experience with water polo, he acknowledged how investing money might make him stay, saying, “I didn't pay the fee either, I believe, so I really didn't have anything invested. I could have just left at that moment, been like “Yeah, I can't do this; I'm out.”

Emily, Ashley, and Megan accepted their investments and rejected the idea of loss. Emily said, “No, I don't think that's really too important because I go to swimming—like I *want* to go to swimming, so I don't consider it a waste of time or anything. No, I think we can leave that out.” Ashley noted,

I can't think of anything like physically that I've put in; I mean there was like the money that I paid, but that's for the practice space. I can just think of time and I don't think my time has been wasted.

Megan said, “I don't really see it as—I don't see it that way. Like, that's my choice. I'm happy I've done it...It's not like I've gone this far I might as well, it's not like that, so, yeah.” To summarize, this construct had a noteworthy strengthening effect for two of the participants (both in Grade 12), but did not factor at all into other participants' pictures of commitment.

Social Constraints and commitment to team

Parkside: Feeling Obligated N=8 (Social Constraints)					
“I don’t really swim for anyone else, I just swim for myself.” – Emily					
Definition	Feeling obligated to keep swimming with the Parkside Panthers because of other people’s expectations.				
Hypothesized Relationship	Feelings of obligation to others to continue swimming with the Parkside Panthers strengthens commitment.				
Lead Up Questions	Do you feel a sense of obligation to keep swimming for the Parkside Panthers because of the expectations of other people? Whose expectations are most important to you?				
Feel Obligated	Derivation of Commitment Effect		Direction of Commitment Effect		
	Swimmer	Construct	Strengthen	Lessen	None
62.5% (5)	12.5% (1) Confirmed	25% (2) (0 of 1)	25% (2)	0% (0)	75% (6)

Figure 4. Social Constraints and commitment to team.

As shown in Figure 4, five participants acknowledged feeling some sense of obligation to keep swimming due to other people’s expectations, but only two considered it to have any effect on their commitment. Neil brought up the subject of parental expectations unprompted, as a source of commitment:

Um, I guess it’d probably have to be not to let down my parents....Like they didn’t push me into doing it, but they kinda hold some kind of expectations, a little bit, at least....Yeah, so it’s kind of something that is kinda like a source of stress, I would say probably, concerning swimming, but also what keeps me in a little bit. It’s not a major thing, but yeah.

However, when the construct was introduced, he rejected any effect on his commitment:

Um...I'd probably say no for that one, just because, like, yeah, my parents do expect me to do it, but I wouldn't say it's to the extent of making me obligated to do it...I know if I stop swimming they'd probably get angry with me for a bit, and they'd just be like, "That's fine," right? But I don't think I'm obligated to swim because of what other people would think.

Peter mentioned (when talking about Personal Investments) that his mom buys him "swimming stuff" and then expects him to use it, but didn't talk about his parents when the construct was introduced.

Instead, he and other participants referred to the expectations held by coaches and friends. Peter said, "Uh, definitely coach's expectations, they have expectations to be on time [laughter] and to show up to practice in general." He found that this had a strengthening effect on his commitment. Tyler felt a little bit obligated to continue swimming because of the team's circumstances this season:

I would say that my friends would be disappointed if I stopped coming, especially with how small our team is this year and everything, so I guess in a way I do feel obligated, but it's not a major—it's kind of, I do it for myself more than anything.

When asked whose expectations meant the most to him, he replied, "Definitely I would say the coaches because they put so much effort in and then if I quit now, right before Divisionals, I would feel like that's just a slap in the face, so definitely the coaches for that."

Megan saw any expectations as being “light and casual. . . . more like a fun obligation.” She didn’t see this as having any impact on her commitment. These joking peer interactions might be better construed as Social Support. Emily commented,

I don’t really think it really applies to me because I don’t really swim for anyone else, I just swim for myself, but maybe, like, Frank and I, like the head coach here, um, we’re pretty close, so I think he might be disappointed if I stopped swimming for Parkside.

After further probing, however, Emily said that it wouldn’t be a big enough factor to keep her in if other things weren’t going so well and it shouldn’t be included in her picture of commitment. Kris and Shane were quick to reject the construct, saying that it wasn’t applicable to them and Ashley suggested, “I think it’s more self-motivation.” Overall, this was found to be a very minor or nonexistent factor in participants’ commitment.

Social Support and commitment to team

All eight participants identified social support as a positive source of personal commitment, as shown in Figure 5. Six participants brought up the concept unprompted, and two other participants readily accepted the construct when it was introduced. Social support was found to be present in both emotional and instrumental (tangible) forms, from coaches, captains, teammates, and parents. Companionship support is another form of social support to which participants alluded. This was present during both practices and competitions.

Parkside: Feeling Encouraged and Supported N=8 (Social Support)					
“Oh, yeah! Like all the coaches, my parents, my friends, like, yeah. And even the other people that I swim with, they’re, like, I know even me, like, I’m always encouraging people... It just makes you feel like you can do it and it makes you want to do it more.” – Emily					
Definition	The encouragement and support you may feel from other people for swimming with the Parkside Panthers.				
Hypothesized Relationship	Feelings of encouragement and support from others strengthen commitment.				
Lead Up Questions	Do you feel this encouragement and support from other people for swimming for the Parkside Panthers? Whose encouragement and support are most important to you?				
Receive Encouragement and Support	Derivation of Commitment Effect		Direction of Commitment Effect		
	Swimmer	Construct	Strengthen	Lessen	None
100% (8)	75% (6) Confirmed 100% (6 of 6)	25% (2)	100% (8)	0% (0)	0% (0)

Figure 5. Social Support and commitment to team.

Kris gave this example of the instrumental support provided by coaches:
 “If we don’t feel confident about something, we can always go to the coaching staff and they’ll explain it to us.” He expanded:

While I’m doing this stroke, trying to figure out what could I do to improve, the coach is already there thinking what I could do and as soon as I touch the wall, he tells me, ‘Tighten your stroke, lift up your back, do the legs, push,’ and all that.

Tyler said about one of the coaches,

He volunteers so much of his time to swim and it is his passion, it’s his life, swimming, so he’s always happy to, like if we need a ride somewhere, he’ll be like, “You know what, I’ll find you a ride, I’ll do this,

I'll do that just so that you can participate" because he loves it as much as we do.

In the Desire to Excel section, there are further examples of how coaches support swimmers in achieving their goals. Peter also found that this kind of instrumental support was a way of demonstrating caring: "I guess when coaches kind of get on your case about trying to fix something...like sometimes it's annoying, but they are showing that they care about you and that they're trying to help you out."

When asked whose encouragement and support meant the most to her, Megan responded, "Probably the coaches," because they really know what they're talking about."

Peter, Tyler, and Megan talked about the emotional support provided by the coaches. Peter said,

I like coaches that are really one-on-one with the swimmers and they're really interested in what their swimmers are doing and I think that kind of shows that people are caring about you and it's giving you a reason to come back.

Tyler shared this sentiment:

They're amazing! Frank spends so much time here, and Smith, and all of the volunteer coaches; it's nice knowing that so many people want to make us better and it's a good feeling. It keeps us coming back for sure."

When Megan was asked who encouraged and supported her the most, she replied,

That's hard to say, actually, because I think there's this atmosphere of encouragement, that anyone can encourage anyone....Um, I know the

captains and coaches are especially good at it, and then also any friends that I've made on the swim team are good at it, but like, especially the coaches....Both head coaches, like Frank and Mr. Smith, they learned my name within the first, I don't know how long, but very short time and so whenever they saw me, they were like, 'Hey Megan, like, how are you?' And it wasn't even like, 'Oh, come out to practice,' it was like, 'How are you? Like, how are you doing?' That kind of thing."

Captains were also cited as an important form of instrumental and emotional support. Ashley had this example of instrumental and emotional support from a captain:

Um, well, we had our practice last Sunday and I came for an hour and a half and Michelle spent the entire hour and a half helping me work on my fly and like she—yeah, so that was a lot of support and then she was encouraging me a lot because she told me that I could cut like however many seconds I needed off my time to place, so that gave me a lot of confidence too because I was really nervous about doing fly at Divisionals, but that helped a lot.

When asked whose encouragement and support meant the most to her, Ashley replied, "Um, probably the captains....I mean the coaches are important too, but yeah, like it's nice to know that you're like, a part of the team and that um, like people on the team think that as well." Emily also found the captains to be a source of encouragement:

The captains are really good, um, like Michelle this morning, she was telling me, like yeah, like, “I think you can do it, like I know you can do it,” and then I was like, “Well, yeah, maybe I can!”

Peter found teammates to be a key source of support. When he was asked whose encouragement and support was most important to him or who he felt he got the most from, he said, “I get the most from teammates, mostly. ‘Cause my parents don’t really keep up with this stuff.” He described their encouragement like this: “There’s lots of cheering going on, there’s lots of comparing of times and compliments and high fiving after races and everything like that.” He noted, “If people are like trash-talking you the whole time you’re not gonna feel good about swimming.” Kris mentioned that teammates can also be a source of instrumental support:

Like if the coaches are busy, I’m one of those kids that people can go up to and say, “Hey, I don’t know how to do this in breaststroke.” “Well, come with me into the water, we’ll see what you can do.” And if it’s a stroke that I don’t really like and I need help with it, I can always go to somebody and say, “Hey, am I doing it right?” So yeah, that would definitely be a positive for coming here.

Two participants mentioned their parents as sources of encouragement and support. For Emily, this came in the form of instrumental support:

They really supported me going to Parkside because I was supposed to go to (other high school) because that’s where, like it’s beside where we live, but my parents, they were willing to, ‘cause we’re outside of the district

for Parkside, they were willing to move so that I could go to Parkside for swimming, so definitely, they were really supportive.

Neil described his parents' emotional support and encouragement:

Um, like sometimes if I take a couple practices off, they'll probably be like, "Hey, you know, you should probably go back just to stay in shape and just so you're still like, in tune with the rest of the team," and like, when the times get tough, of like me thinking of quitting or just giving up, they'll be like "No, you should continue with it," and that's of course a good thing.

Kris also mentioned incidentally that his parents make sacrifices (waking up very early in the morning) to drive him to practice.

Another aspect of social support is companionship support. This was described as a positive factor when it came to competitions. Megan said,

I think, um, in that sense we just have to do our best. It's not like you have to be the best swimmer. You can't really make that many mistakes; I mean, you can have a bad swim, but like, "Ok, I had a bad swim." Like, it's not as big of a deal, I think....Like you're not going to be first or last, chances are, so it doesn't really matter....I like how it's competitive in a sense because we're a team.

Ashley also appreciated the team support. She said,

I've been on teams before....but I mean, I've never really like experienced something like that, where in an individual sport.... people think of it as an individual sport, but at Parkside, we think about it as a team sport....I

think it's not because we have a whole bunch of stronger swimmers but it's more like the closeness of our team that helps us win.

This also came through for practices. Megan talked about the importance of team support to outweigh competing priorities:

That's huge for me. Um, when someone approaches me about swimming, it's like a reminder that, "Oh yeah, I want to do that," um, or if someone like, invites me to it, I feel part of it, so feeling included, um, is definitely a part of that commitment. I think like mostly the thing that stops me from being committed is the feeling of, "Oh, I feel too busy to do that....but then to contrast that is like, my friend's like, "Oh, like what are you doing today after school?" I'm like, "Well, I was going to do some homework, but I can do that later. Why?" It's like, "Oh yeah, I guess I have time," so yeah, that peer interaction is a reality check for me.

Ashley said,

It's a lot easier to motivate yourself when there's times that are set and there's people that are gonna be there to help you....if I was swimming on my own, I don't think I would ever go at 7 in the morning, so. But then I find like, when I come here, like I enjoy going at 7 in the morning.

To summarize, social support, found in various forms and from various sources, had a strengthening effect on all participants' commitment.

Desire to Excel and commitment to team:

Parkside: Desire to Excel N=8					
“Getting actual achievements and all that. Yeah...I do relate with that, because that’s really—I think my whole goal in life is just, ‘Be better than I was last time.’” – Kris					
Definition	Wanting or striving to achieve excellence.				
Hypothesized Relationship	Desire to Excel strengthens commitment.				
Lead Up Questions	That could mean getting personal bests, improving your own stroke, or beating other people, winning races. Would you say that’s part of your commitment?				
Have Desire to Excel (N=8)	Derivation of Commitment Effect		Direction of Commitment Effect		
	Swimmer	Construct	Strengthen	Lessen	None
100% (8)	75% (6) Confirmed 83.3% (5 of 6)	25% (2)	100% (8)	0% (0)	0% (0)

Figure 6. Desire to Excel and commitment to team.

All eight participants confirmed that their desire to excel strengthened their commitment, though for some the effect was more pronounced than for others. Six participants brought up the construct on their own, saying that competition or personal achievements strengthened their commitment. One participant had mentioned “friendly competition” as a source of commitment, but didn’t see it as fitting with Desire to Excel because it was only for practice. This is the reason for the 83.5% confirmation shown in Figure 6. The remaining two participants accepted Desire to Excel as a part of their commitment when the construct was introduced.

Teammates played a part in some participants' desire to excel. Kris said about friendly competition,

Well, if I [went] just to practice swimming, I wouldn't be—I probably would just do the same thing at (big swim club), just walk back and forth. But friendly—half these people I know from the year before and I've met them before swimming and I haven't associated them with swimming, so now when I come here and I see them, it's like, "Ok, let's see if I can just beat them real quick on a 25 freestyle." And if I don't, if I do lose, I'll just say, "Well, practice, and maybe next time I'll beat them."

Peter said,

Well, other people on the team, I kind of set goals for myself like based on how high up they are compared to me or like how good they are. I kind of look at them like "Wow, that's good, I want to swim like that."

He described one former teammate as an aspirational role model:

In Grade 12, just swimming with school only five times a week, he'd gotten down to, um, sub 30 in his 50 fly, which was pretty impressive, and he's a provincial champion now so I kind of looked up to him.

Coaches were important in helping participants achieve their goals. Peter said, "I'm always looking to get better and times are kind of a symbol that you are improving and you can do it in increments, and learning technique from the coaches helps you achieve the times you want." Ashley noted,

Well, big part of like the reason that I wanted to swim is to get in better shape and obviously improve as a swimmer and I feel like a lot of the

coaches...have helped me a lot with fitness in general and also each individual stroke, and so that was really important to me.

Kris also mentioned how the coaches give them “tips and tricks how to improve the time, like, oh, ‘Have a tighter turn,’ ‘Pull out more in breaststroke.’”

Others found that the upcoming Divisional and City swim meets were highly motivating. When Shane was asked about his sources of commitment, he said,

I think getting better so I can, uh, be competitive at the meets and not just going to swim them and not actually make it to City’s, or whatever...like if it was just a swim team where we didn’t compete, it was just kind of like more learning to swim or learning to swim better, I wouldn’t feel as inclined to push myself to get better, to shorten my times.

Similarly, Ashley said,

I don’t think I would be as committed if all we did at Parkside was just like practice and swim in the Parkside pool, but like, I’m really excited for Divisionals and I hope that if I make it to City’s—like, that’s what’s like driving me right now and that’s the reason I come to practice, like to improve for that so that I can do well.

Some participants were more focused on personal bests, rather than placing at meets. Emily said about personal achievements,

It makes me feel—it makes me feel successful. And it, it kind of, it makes me feel like I’m getting somewhere, like all the work is kind of like coming together, so that makes me want to keep on doing it.

Tyler said,

The first day I was swimming, I had to learn how to float again, basically! ‘Cause I had been swimming in like lakes and stuff, just tubing, stuff like that, nothing ever competitive. I knew the basics, but I didn’t know how bad my skills had dropped since I finished my swim lessons, so um, seeing my improvement from the first day and how far I’ve come, is just, it’s a really good feeling and knowing that I can achieve it and keep going, keep pushing myself, it’s just—it keeps me wanting to come back.

Tyler decided that overall his desire to excel included both personal improvement as well as doing well in competition: “I like to win, but I also, I like to improve, so it’s a little bit of both.”

For Megan and Neil, Desire to Excel went beyond just swimming into other areas of their life. Megan said,

I think for me part of it is like, yeah, that desire to start and maintain a healthy lifestyle, but um, excel, the word is kind of throwing me off a little bit ‘cause I think of like, “Oh, I have to be the best,” but it’s not like that, but, so yeah, I think wanting to improve my own personal things, like goals and stuff, I think that’s part of it, but yeah. Not in terms of being the best.”

Neil acknowledged his Desire to Excel like this:

I’d probably say so, yeah, just, I wouldn’t say in terms of getting the best times; I mean, that’s important too, but not entirely, but it’s more being as

well-rounded as I can be. Because I think I'm pretty good in like, academics, so now it's like sports and leadership as well, I guess.

In summary, this construct was evident as a source of strengthened commitment in all eight participants, with every participant exhibiting Mastery and/or Social Achievement behaviours.

Team Tradition and commitment to team:

Parkside: Team Tradition N=8					
We've been city champions for a long time, and it's not even that, but just like coming to the practices I can tell that...we're proud to be like a Parkside team, like a cheer we do every day and at the practices, how many people we get to come out. So I think that's definitely a factor. – Shane					
Definition	The pride and honour of being a part of a team's history and the responsibility to maintain that history through high standards of performance and conduct.				
Hypothesized Relationship	Team Tradition strengthens commitment.				
Lead Up Questions	Do you feel that at all? What sort of history does the Parkside Panthers swim team have?				
Have Team Tradition	Derivation of Commitment Effect		Direction of Commitment Effect		
	Swimmer	Construct	Strengthen	Lessen	None
100% (8)	25% (2) Confirmed 100% (2 of 2)	75% (6)	100% (8)	25% (2)	0% (0)

Figure 7. Team Tradition and commitment to team.

All eight participants cited Team Tradition as a source of commitment, and two of them mentioned this on their own, unprompted. The other six readily accepted it when the construct was introduced. As indicated in Figure 7, all participants said that they found that it strengthened their commitment, but two

participants found that it also lessened their commitment at times, due to the pressure of having to maintain a very long winning streak.

Neil, unprompted, said, “The streak that we have going, just every year, there’s more pressure, I would say.” He went on to explain the situation like this:

Um, well, I mean, 27 years, that’s no easy thing, so, like even in Grade 10 and 11, I’ve noticed that the pressure’s just been building up every single year and like, sometimes we have our easy years where we just sweep everything, but sometimes it’s like just barely, but like, we’ve all come to the realization that one day it’s gonna end, but we don’t wanna be the team that lost it, you know?

He continued, “So it’s kinda just like what can we do more to keep that streak alive so we don’t have that burden any more, I guess?” When asked if this was something that strengthened his commitment, he responded,

Um, kind of a bit of both, I would say. Sometimes like, I just don’t care, like when we get the scores from the other school and it’s like, ‘Oh, wow, they’re so good,’ and you just almost give up hope, but then you get your scores, and you’re like, “Oh, well, we still have a chance.”

When Kris was asked why Team Tradition might have a negative impact on commitment, he responded,

Pressure. Because let’s say we did-not saying we will-but we do lose this season, we just lost [28] years of history in the making. So really, I think that’s why not that many kids are coming; they don’t want to be responsible for the downfall of the team. It kind of tears me apart, but you

know, we've got another 49, 50 kids here who really care about what they do and I want to be associated with that—people who tried instead of people who gave up half-way.

Though he said that Team Tradition was “sort of a positive and a negative for me,” the quote above suggests that Kris’s commitment was only positively affected by Team Tradition.

Ashley and Peter certainly felt that the threat of ending their winning streak had a strengthening effect on commitment, which was reflected in increased attendance. Ashley said,

Parkside swim team has a huge history of like winning 27 years and um, when Frank gave us that speech about like, that he was pretty much just scared that we wouldn't win, like you could tell how everyone in the morning like really wanted to band together and like we wanted to all come to as many practices as we can and like, help out the team because we didn't want to be that one year that lost.

Peter said, “I kind of feel responsible if we lose and I don't want this to be the year that we lose, so I've kind of been hinting to people to come to practice.”

Ashley also suggested that Team Tradition would cause her to practice outside of school as well: “I wouldn't wanna be like not as good and just like kind of let the team down and so I—and that's a big reason that I would practice on my own too, is to like improve for next year with Parkside.”

Megan, in her third year on the team, brought up the concept of Team Tradition unprompted. She said,

Um, so Parkside's legacy as a swim team, that makes me want to be part of it, and it's something I'm really proud of. Um, like when I go to a different pool, I put that Parkside swim cap on, I'm like "Yeah, like this is—that's right!" Um, and Parkside cheers, like I don't really like cheering all that much, but when Parkside does it it's kind of like "We can do this!" and it's kind of a pep up thing so that's kind of cool.

She continued, "I think it's an identity that isn't exclusive...you can be part of that legacy, you just have to show up, that's all you have to do, show up and swim and do your best."

Tyler, brand new to the school and the team, certainly felt included right from the start and felt "very proud to be on the team." He said,

I know we that we have a lot of like cheers and everything throughout the years that they've kind of built up which represent us and um, like our Parkside colours and our Parkside logo and everything, but I don't know too in-depth of it, because um, I'm pretty new here, and just haven't really take then time to get to know traditions as well. But even, I would say that the tradition plays quite a bit of a role, like it's pretty awesome when we do our cheers, and seeing the expressions on the other team's faces, and think like, "Yes, I am a Panther," you know. I don't want to hide it; I want to be proud of it.

Megan had more to say on the subject of other people's perceptions of the team:

Well, I guess this actually is a little bit competitive of me but like, when I look at other schools and they look at us, like they look at us like a little

bit differently or maybe it's just us picturing it, but it feels good to think like, "Oh yeah, like, we're good."

Shane said, "I feel like...people are impressed when I tell them that I'm on the swim team." Overall, Team Tradition was a very strong source of positive commitment in these participants.

Other Priorities and commitment to team

As seen in Figure 8, all eight participants acknowledged having other priorities, and all but one found that these other priorities lessened their commitment. Kris described his busy schedule and the difficulties in swimming as much as he did at the beginning of the season:

Because, like, I used to be an eight times a week swimmer but then, I now have drama on Mondays, Wednesdays, and Fridays after school, so that takes away about two of the practice days since we don't have practice Friday, and my work at any time could say, "Hey, I need you to come in now, I need you to come in soon," and I have to drop everything that I'm doing and go straight to work, right?

Shane had a similarly busy schedule:

It's mainly school and boxing. I've had like eight fights with boxing now, so I'm doing that three times a week for two hours in the evening so I'm usually pretty tuckered out. Most of my spare energy goes to swimming, and just with school I'm in the full AP, so that keeps me really busy with homework.

Parkside Other Priorities N=8 (Formerly Involvement Alternatives)					
Um, that would probably be school. Because I'm trying to get into (university), so, just homework conflicts and stuff kind of cause commitment issues, but then as well work, because that takes up most of my after schools, so, those are kind of two other commitments that counteract the swimming. – Tyler					
Definition	Other priorities that you may have in your life which swimming for Parkside makes difficult, or maybe impossible, to do.				
Hypothesized Relationship	More attractive and/or pressing other priorities lessen commitment.				
Lead Up Question	Do you have other priorities in your life?				
Have Other Priorities (N=8)	Derivation of Commitment Effect		Direction of Commitment Effect		
	Swimmer	Construct	Strengthen	Lessen	None
100% (8)	62.5% (5) Confirmed 100% (5 of 5)	37.5% (3)	0% (0)	87.5% (7)	12.5% (1)

Figure 8. Other Priorities and commitment to team.

Tyler recognized that participation on the Parkside swim team was something he enjoyed in the moment, but that school and work would have a longer-term impact on his life:

At my level of swimming, I'm obviously not going to make a career out of it. It's more of just a, well not really pastime, but it's more of just a current—well, because this is my last year of swimming and everything, so, but school whereas kind of determines my whole future so it's kinda got to be put first above swimming, so unfortunately, but, and then for work as well, I need to make money so I can pay for my school.

However, Tyler also noted,

When I'm swimming with Parkside, I'm focused on the swimming, I don't think of anything else. It's swimming and oh, talking to my friend over

here, and then back to swimming. I don't think like "Oh, I should be doing homework right now," or "Oh, I could be out playing basketball or something."

Ashley and Megan talked about how they managed the balance between swimming and other activities. Ashley's primary sport was soccer, and this was how she decided to deal with being pulled between the two sports:

Um well, if it's just a practice, I usually—well, now that it's closer to Divisionals, I've been choosing swimming, but if it's a game, I would choose soccer. But so far it hasn't happened where it's been a game and swimming.

Megan suggested that sometimes she was dealing more with the feeling of being busy, rather than an actual time crunch. She said,

So, well, this year I was cross-country captain, so like every day after school I went to practice, that's just what I did, so it's kind of like "Ok, I go in the morning," but I'm also—two mornings a week I'm at Capstone, which is this other program with Parkside, so that basically leaves three mornings a week, and then to get up at 7 o'clock, that's kind of hard when I'm doing stuff every day so yeah, a little busy, but it's also a mental thing because sometimes it's like I feel too busy, like mentally, like whether I'm actually too busy is debatable. I have time, but yeah. Just a mental thing, I guess.

When cross-country ended, Megan started swimming more often.

For Emily, it was an easy decision: “Um, well, like I said, I also do dancing, but I only dance twice a week and before I’ve said, like, if I have to choose between swimming and dancing, I’ll choose swimming.” Her dedication to swimming is further evidenced by this quote: “I’ve had like, a shoulder injury so I have to go to physiotherapy about like, three times a week, so sometimes I’ll come to practice for thirty minutes and then I’ll just go.” Neil, on the other hand, felt that having to miss his karate classes for swimming lessened his commitment to the team.

For some participants, sleep was an attractive alternative that interfered with swimming. Peter said,

Sometimes I’ll show up a little bit late ‘cause I’ll sleep in for an extra something, and it’s usually like 15 minutes and then I’ll just get out of the house later....I have trouble waking up when my alarm goes off, so I’ve resorted to setting it for 5:00 even though I have to be up for 5:45.

Shane also had trouble getting up in the morning: “Uh, the early practices, I find sometimes it makes me not as committed. I’ll sometimes just sleep through my alarm, or not get up. And I know there’s the afternoon practices, but I don’t have time for those ones.” He admitted that his choices at night likely affected his ability to get up the next morning:

Usually I’m , I’m bad with going to bed, and I’ll often like—I should be going to bed and getting like 8 hours—but I’ll go to bed really late, I’ll stay up, I’ll play on the computer, I’ll do things like that, and then sometimes I just wake up and I just can’t get myself out of bed.

In summary, all participants had other priorities that made it harder for them to attend swim practices regularly. However, only one participant felt that he was missing out on an attractive alternative by swimming so often. Most of the participants enjoyed their time in the pool and expressed a desire to swim more often.

Valuable Opportunities and commitment to team

As shown in Figure 9, all of the participants identified valuable opportunities, but two did not feel that these had any impact on their commitment. For the remaining six, having valuable opportunities strengthened their commitment. Seven participants mentioned sources of commitment that could be considered Valuable Opportunities unprompted, but one of these seven participants did not confirm that the sources he'd listed fit into the Valuable Opportunities category and he did not consider Valuable Opportunities to be a part of his picture of commitment.

All eight of the participants expressed a desire to stay in shape and live a healthy lifestyle, and swimming with the Parkside swim team at an easily accessible facility allowed them opportunities to do that. Megan said,

Yeah, so I've kind of made it a goal, like not when I'm sick, but at least when I'm healthy, to exercise at least every second day, and whether that's like, yoga in my room with like Youtube videos or whether that's swimming or running, and swimming's kind of an easy way because I go to Parkside, it's like right there, so yeah. Just, it helps with my commitment to that.

Tyler found that the opportunity to swim in the morning was important to him for his physical and mental health:

Um, with how busy I am with school and work, being able to swim in the morning and get exercise in is very important to me because it's hard when you, right after school, work from 4 to 11; you can't really fit in that exercise so having that exercise in the morning helps a lot with just general health and when I exercise I'm generally a lot happier of a person so it definitely keeps me coming back....It has to do with confidence as well, I feel....when you exercise you just, you feel like you're just making your body better. That leads to confidence.”

Peter rated the opportunities for health and exercise as valuable, but admitted that he would probably “be out playing badminton or running” if he wasn't able to swim. This led him to rate Valuable Opportunities as a “borderline” source of strengthened commitment. Shane noted that “the easily accessible facility definitely helps. If I had to go all the way to a rec centre or something, it would be different.” Similarly, Megan said, “I think once I leave Parkside it will be a little harder to get out, 'cause here, the pool's right there.”

Six participants expressed that the coaching they received at Parkside was valuable, and might not be available elsewhere (especially at such a low price).

Kris commented,

You could say a valuable commodity would be Frank...he really is probably one of those people that you would want with you 'cause not only, he's been swimming for like, God knows how many years and he's

been scuba diving and he's been doing all this stuff. He really knows what he's doing, so you can't get that out of (big swim club). This is the real deal.

Emily said, "Um, well, I teach swimming...I guess, my technique-wise, I'd want to keep on swimming with Parkside 'cause I get the coaching. Shane said, "I feel like, like the practice, like the coaching, it can be really one-on-one at times. I feel like that would be hard to get elsewhere." Megan said, "The opportunity to get like, criticism and compliments and coaching from coaches that are really good without having to pay a lot...that's huge."

Parkside Valuable Opportunities N=8 (Formerly Involvement Opportunities)					
Well, I know I'm going to want to keep on coming back, because I know that I'm gonna stay healthy and everything throughout and it will help, like everything, like my social life and like everything like that and how I feel about myself, so that makes me want to go swimming. - Emily					
Definition	Valuable opportunities you may have which you would miss if you were no longer swimming for Parkside.				
Hypothesized Relationship	Valuable opportunities strengthen commitment.				
Lead Up Question	What valuable opportunities do you have like this—any?				
Have Valuable Opportunities (N=8)	Derivation of Commitment Effect		Direction of Commitment Effect		
	Swimmer	Construct	Strengthen	Lessen	None
100% (8)	75% (6) Confirmed	25% (2) 83.3% (5 of 6)	75% (6)	0% (0)	25% (2)

Figure 9. Valuable Opportunities and commitment to team.

Ashley and Peter indicated that not having a coach had a negative impact on their commitment to swimming on their own, outside of Parkside. Ashley said,

I don't really like to think about like, what sets I'm doing and like, I just want—like I think it would be easier for me if I just like focused on a stroke and then I had someone else helping, like with my technique, and then telling me sets to do, like I'm not good at like thinking about that on my own.

Peter said, “I went a couple times by myself but it was always really awkward ‘cause I didn't have any sets to do and I was just like, fooling around.”

Opportunities for making friends and meeting new people were valued by many participants. Shane said,

Uh, with Peter, really like—I really like got to know him because of swim this year and he's a good friend of mine and I'm really glad that happened. I don't think it would have happened as much without the swim team. And just making all these new acquaintances, like with the captains, like Michelle and Dylan, they're just all nice people that I'm glad to have met.

Ashley said, “Uh, yeah, I think it applies...because of the opportunities that I have to like meet new people and also then go to the meet and like compete.” Tyler said,

“It's um, very social, like you get to meet people, but as well as you get to meet people from other schools and it's very, um, real, they're not like, “Oh, I'm better than you,” it's just like, “Hey, you're swimming; cool; let's hang out.”

He added, “I would have never had these social aspects if I wouldn't have joined the swim team.”

Emily felt that her experience on the Parkside swim team provided her with a unique sport to put on applications for college or university. “So maybe like that, like, because not everyone swims and I think people know that taking swimming kind of, like swimming competitively takes hard work and stuff, so it might look good.” Shane was also looking towards the future:

I’m interested in sports as a career choice, so I feel like it’s important if I’m truly going to go down that path, that I have to understand it personally, so by doing like as many those things as I can, by staying in good shape, I can do it better.

Other valuable opportunities included social recognition, the chance to go on a scuba trip over spring break, food and social events, and just the chance to have a mental break from the stresses of schoolwork. Megan said, “If a stranger like sees that you’re on the swim team or something and then they’re like ‘Hey, like, good job,’ it’s really cool.” Neil said, “I’m taking a lot of high-intensity courses this year, so like, just to have that hour break where you just forget about it and you just exercise or like just hang out, it’s kind of, yeah, a good thing.”

Finally, Tyler explained,

It’s a chance, especially because I’ve never done it before and coming into such a different high school, seeing that there’s things like this out there compared to what I’m used to. I feel really um, what’s the word I’m looking for, really um, lucky that I had the chance to try it out because not many people get to in smaller towns.

To summarize, all of the participants experienced valuable opportunities through their participation on the Parkside swim team. Some participants found that these opportunities had little or no impact on their commitment, but for others, these opportunities were considered to be quite significant and had a subsequent strengthening effect on their commitment.

Sport Enjoyment and commitment to team

Parkside Sport Enjoyment N=8					
“I mean it’s something that I love, so like getting up in the morning, like a lot of people are like, ‘Oh, you have get up at 6:30 just to get here on time,’ but it’s really, like—I don’t see it as something that’s hard to do because I look forward to coming to practice every day.” - Ashley					
Definition	The positive feelings you may have about swimming for Parkside, such as pleasure, fun, liking, or loving the experience.				
Hypothesized Relationship	Sport Enjoyment strengthens commitment.				
Background Questions	What has been the most important thing that’s kept you swimming with the Parkside Panthers this season/for all these seasons? What have you found most enjoyable about swimming with Parkside, specifically?				
Lead Up Question	If you were to rate your enjoyment for swimming with Parkside on a scale from 1 to 7, what would it be?				
Have Sport Enjoyment (N=8)	Derivation of Commitment Effect		Direction of Commitment Effect		
	Swimmer	Construct	Strengthen	Lessen	None
100% (8)	50% (4)	50% (4)	100%	0%	0%
	Confirmed 100% (4 of 4)				

Figure 10. Sport Enjoyment and commitment to team.

All eight participants indicated that Sport Enjoyment was an important factor that strengthened their commitment to swimming with Parkside. Four participants mentioned “fun” or “love of the sport” on their own. The remaining

participants readily acknowledged Sport Enjoyment as a source of commitment when the construct was presented to them with responses like, “Yeah, definitely” (Shane) and “Yeah, I’d probably say that’s a big thing” (Neil). When asked to rate his enjoyment for swimming with Parkside on a scale of 1 to 7, Kris responded without hesitation, “Eight. This is really fun.” Participants’ overall enjoyment of swimming with Parkside was reflected with a mean score of 6.1 on the Likert scale. It should be noted that three participants (in addition to the four indicated in Figure 10) also identified one or more of their self-derived determinants of their commitment as being sources of enjoyment when the construct was introduced.

For Tyler, this was his first experience with competitive swimming and he described his newfound appreciation for the sport like this:

It’s overall very enjoyable. Everything kinda just makes it, I don’t know, I love sports, so, and I’ve never tried competitive swimming before, so it was very new to me, and I found right away that it was, I liked it more than—I’d played basketball for five years and then it was like, “Oh, swimming over basketball” kind of thing, so I really enjoy it.

Other participants had tried competitive swimming with other clubs before with negative results. For them Parkside was an opportunity to give swimming another chance. Kris said:

I’ve been swimming before and I didn’t find it quite enjoyable. My parents pulled me out of it because they saw when I was swimming with the flutter board I would always stop on the bottom and just walk the most

I could, but here when I come to swim, I decided just, ‘Whatever, let’s go; let’s try it again’ and here it’s really enjoyable.”

For Ashley, a lack of fun in practice led her to quit competitive swimming for a while:

Uh, well at (big swim club), the way I felt is like, this is the reason that I quit, is just like swimming all the time and it was like hard and we would never like—like there would never be like a fun practice and like I get it, like it’s competitive, but it would just be like practice, practice, practice all the time and after a while, no matter how much like, you love swimming, like it can get a little tiring.

Ashley’s quote in the table above demonstrates the vast difference in enjoyment between that “big club” experience and her experience at Parkside.

As previously mentioned, participants identified multiple sources of enjoyment that contributed to their commitment to swimming with Parkside. On the physical side of things, participants cited relaxation, the feeling of the water, and the exercise itself as sources of enjoyment. Neil said:

I’ve always felt comfortable like, in the water; like every time I get into the ocean or the beach or the pool, like, I can’t ever think of a time where I wasn’t—I didn’t want to be there. Like, I don’t know, I kinda just like water, I guess. I can’t really put a tab on what it is.

Tyler said, “I find that swimming, like competitive swimming is—it’s a really good workout....I really enjoy exercising.” Peter said, “After I swim, I just feel

good, that I'm doing something with my free time that's actually bettering myself and pushing me towards a more healthy lifestyle.”

Another category of enjoyment sources included aspects such as challenge, personal development, improvement, and competition. Kris said:

Even when we're down to work and we're doing the 20 by 25 hypos which is the holding your breath for as long as you can, that's—it really pushes you, and that's what I enjoy about multiple sports. Like in basketball, I may not look very tall—I'm six foot, almost six foot one—but I have to play the five position which is the, where most six foot six players play, so I enjoy the challenge of having to deal with something pretty, pretty large.

Peter found himself measuring improvement and enjoying a sense of achievement during tough practices:

Sometimes we have really insane sets and then as I'm doing them, I'll start saying to myself, “Why am I doing this?” And then after I do it, I'll feel like, “Hey, I just did that, that's pretty good,” and then I'll feel good about it.

He noted, “I kind of just get a feeling of accomplishment every time, and then that's also getting associated with the sport and with the team.” Additionally, four participants mentioned really liking competition. This appreciation for competition is described in the Desire to Excel section.

All participants talked about people as a source of enjoyment, including teammates, coaches, and just having the opportunity to meet new people and

make new friends. Tyler described his teammates as “incredible and great people.” Peter said, laughing, “Locker room conversations... Those are always fun.” When Kris was asked what he found most enjoyable about swimming for Parkside, he responded, “My friends and the coaches. They’re just, like, too much fun to have, like Sharks and Minnows. You can’t have any more fun than that.”

Emily described how the coaches play a part in making practices enjoyable:

Um... well, just in general, like, we get the workouts and they’re serious, but there’s always like, something fun to do with it, like the coaches are fun... they joke about the push-ups, like, I’ve seen Frank make you do a hundred push-ups, but usually it’s just a joke and it makes us laugh and it just makes the practice a bit lighter and it makes it more enjoyable. And it makes you want to keep on coming back because you know it’s probably going to be like that most of the time.

Tyler explained what he meant when he cited “social aspects” as a source of commitment by describing enjoyable social experiences:

Um, it’s pretty similar to the teammates I guess, but basically just how we can interact as a group and just there’s no, like, drama, there’s no fighting, it’s just people hanging out having fun swimming, doing what they love... I’ve met a lot of swimmers at meets and they’re just always happy and happy to hang out and talk about swimming and so yeah, it’s just good times.

In Peter’s words, “I feel like if you’re having a good time with the people you’re swimming with, you’re more likely to come back, and you’re kind of gonna start

associating good feelings and fun times with the thing you're doing, so you're gonna wanna come back." Shane said, "When I come to swim...I get to go and see the people, so I think that keeps me committed."

Participants appreciated the opportunity to form new friendships which then increased enjoyment during practice. Emily commented:

Uh, well, I make lots of friends on the [swim team] and it goes outside of swimming, as I said, it—like in school, like I'll see them in the hallway and we might not always talk, but we'll, you know, like, smile at each other and it's nice....and then like, the friends, like, in practice it makes it more fun, as well.

Some participants mentioned that the diversity of the team allowed them to form friendships that they may not have formed, otherwise. Neil said,

We....include so many people with so many different levels, that like, at the end of the day, you realize that it doesn't really matter if you've gotten like first, or you've ended up last, like, it's really just like meeting new people, making those connections, I'd say.

Megan noted,

I love having friends who I say hi to in the hallways who aren't people that I would say hi to otherwise....the diverse nature of the swim team kind of like allows you to make friends that you wouldn't—that it's hard to in other social contexts.

Finally, a major source of enjoyment turned out to be a sense of inclusion and community stemming from the team's traditions, legacy, and solidarity.

Emily said,

...all the little things, like we usually have a drag practice every year and that's nice, and um, Chianti's before the meet, and like, just little stuff like that, it makes it fun. Like it's kind of nice to be included in that.

Neil explained,

You have like your team spirit, which is awesome, and then it's like one of the biggest teams in the school so you get to meet a lot of people and you still get to have fun, like, to swim and stuff.

Ashley described it like this:

Well, I like the whole team vibe, like how everyone is I guess, everyone is just connected and like we all have a part in the team and like helping it win and like, I like how we do stuff outside of swimming too, like it's not just we're always swimming and practicing together and at meets, but, yeah, you can tell that like, we're close especially when we do our cheers at meets and stuff like that, so.

For Megan, her dislike of competing in individual sports was counteracted by Parkside's team vibe:

Um, I don't really like individual sports, so in a way, that's something that...weakens, I guess, um, my desire to keep committed, but with the way it is at Parkside, because it's a competition of our whole school, it's almost like a team sport.

Kris agreed with her assessment of swimming, saying,

I can work both with a team and I can work individually...I've been playing tennis, golf, and then I play basketball, water polo, and there's swimming where it's sort of both; going back to sort of Parkside, you swim by yourself but accumulation of points is with a team."

Megan added, "To help be part of something bigger than ourselves. I think that's like something in the human experience that everyone loves and needs to be part of, so this is one way we can do that as a team."

Finally, it is worth noting that after Peter's first year on the Parkside swim team, having no prior competitive swimming experience, he decided to swim with a summer club, as well. When asked about this decision, he said,

"I kind of found out that some of my friends were doing it and Frank had also been telling me to join it a couple times during the swim season....And I, I found enjoyment in swimming, so I also kind of was pushing towards that way, anyway."

This hints at the potential for high school swimming to introduce students to the sport and then, by providing enjoyable experiences, (such as those described by these participants), to encourage broader participation outside of school.

Personal Investments and commitment to swimming

Five participants confirmed that they had invested time, effort, and/or money into swimming, but only three participants found these investments to have an effect on their commitment. As noted in Figure 11, two participants

mentioned sources of commitment on their own, unprompted, which they later confirmed as personal investments.

Swimming: Investing Personal Resources N=8 (Personal Investments)					
Well, it's something I've done all my life, I guess, and I've always been decent at it, so kind of just keeping that up. – Neil					
Definition	The personal resources you may have put into swimming that you can't recover or get back if you leave.				
Hypothesized Relationship	Investing Personal Resources strengthens commitment.				
Lead Up Question	Can you think of anything you've put into it, like that?				
Invest Personal Resources	Derivation of Commitment Effect		Direction of Commitment Effect		
	Swimmer	Construct	Strengthen	Lessen	None
62.5% (5)	25% (2) Confirmed 100% (2 of 2)	12.5% (1)	37.5% (3)	0% (0)	62.5% (5)

Figure 11. Personal Investments and commitment to swimming.

Neil said,

It's one of like the first things—the first sports I ever did, I guess? Like I've been swimming since I was pretty young and like, probably just like, I don't like to end something prematurely, so I'm kinda just sticking with it.

Later on, we had the following exchange:

I: Do you think that's kind of what you were getting at with the long-term participation, or is this totally different?

P: Yeah, that might probably be the same thing.

I: Sort of the time you've put in over the years.

P: Mmm hmm, and I feel it would kind of be a waste to just forget about it.

When Megan was asked about her Personal Investments, we had this conversation:

P: I think that might be a part of—yeah, I'm not sure if that's a positive or a negative thing, though, something that would cause me to swim or cause me not to swim, um, but it kind of reminds me a little bit of this, the bathing suit shopping price thing.

(She had mentioned earlier that she hated bathing suit shopping because of the price and the social stigmas around it).

I: Would you feel like, if you just went out and bought a new swimsuit, you spent, you know, like 80 bucks on it....Would you feel more committed to swim, do you think? Would you feel kind of like, "Well, I spent the money, I have to...?"

P: Probably a little bit. Somewhat. But not as much as I would expect. Like, I think it's a factor, but it's like a very small factor.

Peter mentioned two invested resources: money for suits, club fees, and food, (paid by his parents) as well as his own time, and found these to have a strengthening effect on his commitment. Emily felt that the money her dad spent on a swimming pass for her didn't affect her commitment. For Kris, the benefits he received from swimming seemed ample compensation for his investments:

That I think would be health benefits, really....I've actually gotten my heart rate to like, a new low, like it's a 60, so I can't—I can't get back all

that time that I've put into getting a 60, but that will benefit me in the future.

Ashley and Shane couldn't think of any resources that they'd invested into swimming. Tyler said,

I feel like that one fits more with my team, not as much as just swimming on a regular basis, because if I was just swimming on my own per se, I wouldn't have went out and bought the Parkside hoody or the Parkside shorts or anything; like I still would have been spending money to go to the pool and everything, but it wouldn't have really mattered as much, I feel like?

To summarize, this construct was not a major determinant of participants' commitment to swimming. Only three participants felt that it had a strengthening effect, and for them, it was minor compared to other commitment sources.

Social Constraints and commitment to swimming

As evidenced in Figure 12, none of the participants felt obligated to keep swimming, and this construct subsequently had no effect on their commitment. Kris said, "No. No, because really, it's my thing. Like, nobody knew I swam (big swim club) before. They thought I'd never swam, so." Megan said, "Nothing like that. No." Ashley and Shane were also quick to reject the construct.

Emily, who did most of her swimming outside of Parkside with her dad, had to consider whether this made her feel obligated:

Um, well I think, like, going swimming with my dad, like I think I'd feel bad if I didn't go with him, but he wouldn't make me feel obligated to go,

like if I said I was too tired, he wouldn't make me go, but, I don't think that's a big one, I just—I don't know. I don't think so, no.

When asked if anyone expected him to swim, Neil said, “Um, my parents would, but again, I don't think it's obligation, per se.”

Swimming: Feeling Obligated N=8 (Social Constraints)					
I'd probably say no, just because I've never done it for somebody else, per se. – Neil					
Definition	Feeling obligated to keep swimming because of other people's expectations.				
Hypothesized Relationship	Feelings of obligation to others to continue swimming strengthens commitment.				
Lead Up Questions	Do you feel a sense of obligation to keep swimming because of the expectations of other people? Whose expectations are most important to you?				
Feel Obligated	Derivation of Commitment Effect		Direction of Commitment Effect		
	Swimmer	Construct	Strengthen	Lessen	None
0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	100% (8)
	Confirmed 0% (0 of 0)				

Figure 12. Social Constraints and commitment to swimming.

Peter noted a difference between his experiences with the Parkside swim team and swimming with a summer club:

I felt that less so during summer club but I still kept going anyway, 'cause there definitely were lots of people who weren't showing up some days or would only come like three times a week, but....I felt like it was only obligations I felt because of myself.

Similarly, Tyler said, “No, I would say for swimming not on a team, just in general, would be, I don’t feel obligated to do it, I just kind of want to do it.” Overall, this factor had no effect on participants’ commitment to the sport of swimming.

Social Support and commitment to swimming

Social support was a construct where participants’ perceptions didn’t always align with what was reported, as seen in Figure 13. Three participants perceived social support for swimming outside of Parkside, though Emily’s description of social support seemed more like simply an absence of opposition: “Um, well it’s not like directly, like I don’t directly get encouraged and supported, but like, I never get told like, no, you can’t do that. So I guess, yeah, it is there.” The opposite also occurred—it sounded like Megan received some social support, but she did not perceive herself as being encouraged and supported in her swimming outside of Parkside. She said, “Um, sometimes like, with my family, they encourage me or support me, but it’s not—it’s more neutral then, so I don’t think it’s a big factor.”

Megan described (unprompted) her family as a source of commitment to swimming outside of Parkside:

So going with my family, um, I think that strengthens my commitment because it’s sometimes like a family event, if that makes sense....My family lives a pretty active lifestyle, so when I go with my family it’s kind of like, “Oh yeah, like this is something that I want to be a part of,” and this is something that I want to continue to do in the future like if I were to

ever have a family, um, yeah, just the experience. Again, it's familiar, it's kind of a tradition, um, like Sunday afternoons, like, "K, what are we doing? Oh, I guess we're going swimming!" Like it's just um, something fun, yeah.

However, she had difficulty swimming on her own: "If I'm going with family it's fine, but going on my own is pretty hard....If I don't have anyone to go with, I probably won't go." It turned out that she rejected this construct as not having much impact on her commitment because she didn't perceive much encouragement or support, but really, it was very important to her. Near the end of the interview, she said,

Um...I think that the encouraged and supported one, if I was really encouraged and supported, I would—it would be a part of this. But, like I feel somewhat encouraged by my family, um, but I don't know who else would encourage me or support me in that. So I think it could be a huge factor, but it's not, because I don't know who else would be, if it's not—like, for example, with Parkside it's the coach, or it's the players, or it's my friends or it's my parents, but not really, I mean, yeah. So yeah, it would be a part of it if more people were supportive and encouraging, I guess. So yeah, in this context, I'm not sure who would be.

It seems that the lack of encouragement and support from people outside of her family had a lessening effect on her commitment.

Swimming: Feeling Encouraged and Supported N=8 (Social Support)					
“If I don’t have anyone to go with, I probably won’t go.” – Megan					
Definition	The encouragement and support you may feel from other people for swimming.				
Hypothesized Relationship	Feelings of Encouragement and Support from others strengthens Commitment.				
Lead Up Questions	Do you feel this encouragement and support from other people for swimming? Whose encouragement and support are most important to you?				
Receive Encouragement and Support	Derivation of Commitment Effect		Direction of Commitment Effect		
	Swimmer	Construct	Strengthen	Lessen	None
50% (3)	25% (2) Confirmed 50% (1 of 2)	25% (3)	100% (5)	0% (0)	0% (0)

Figure 13. Social Support and commitment to swimming.

Peter received encouragement and support from his teammates at his summer club: “Especially some of the older teammates on the team, they were out encouraging a lot of the younger members and some of the people newer to swimming, and they were motivating people to come back and to do better.” Tyler found encouragement and support for his swimming even outside of the swimming community:

I like talking about swimming...even with non-swimmers, like my coworkers for example, they’re always like, “Keep at it; it’s good to see that you are”—you know, so definitely I guess that would be a part of it as well.

He anticipated that having people interested in his swimming would keep him going even after the high school swim season ended.

Ashley, Kris, Neil, and Shane did not experience encouragement and support for swimming outside of Parkside. Ashley found that the lack of instrumental support from coaches had a negative impact on her commitment to swimming outside of Parkside. She said, “A reason that I wouldn’t um, swim on my own is probably because I like to have a coach or someone there that would like give me sets and help me work on things.” Similarly, Kris said, “If I’m gonna swim, I need somebody to tell me how to improve....I just need one good person to tell me, ‘You need to fix your stroke.’” Kris also considered the provision of encouragement and emotional support to be a crucial component of any coaching role.

It seems that Social Support was just as important for commitment to the sport of swimming as it was for commitment to the Parkside swim team, but some participants did not include it in their picture of commitment because they were not experiencing encouragement and support at the time.

Desire to Excel and commitment to swimming

Seven participants confirmed that their desire to excel strengthened their commitment to swimming. As seen in Figure 14, four mentioned their desire to excel unprompted, and three accepted it when the construct card was presented. The eighth participant decided that he was not currently experiencing a desire to excel in swimming (outside of the Parkside swim team), but he might, if he was swimming on a team again.

Swimming: Desire to Excel N=8					
I'm always wanting to do better...I can see that being part of my commitment to go. –Emily					
Definition	Wanting or striving to achieve excellence.				
Hypothesized Relationship	Desire to Excel strengthens commitment.				
Lead Up Questions	That could mean getting personal bests, improving your own stroke, or beating other people, winning races. Would you say that's part of your commitment?				
Have Desire to Excel	Derivation of Commitment Effect		Direction of Commitment Effect		
	Swimmer	Construct	Strengthen	Lessen	None
87.5% (7)	50% (4) Confirmed 100% (4 of 4)	37.5% (3)	100% (8)	0% (0)	0% (0)

Figure 14. Desire to Excel and commitment to swimming.

When asked if he felt that Desire to Excel was a factor in his commitment, Kris said,

Um, for just swimming, not really, because Desire to Excel doesn't help me with anything in this instance. I'm not part of a team on this point and swimming solo, you don't really have anything to compete against. You have times from previous, but you don't have somebody there to time you. If you're gonna go to the pool by yourself, it's really, 'Oh, I'll swim a hundred and go home.'

I asked if it would be a factor if he were on a team again, and he replied, "Again, yeah, it would, but it would do with the competitiveness and "Oh, I'm gonna beat this guy beside me." At the same time, Kris suggested that a mastery climate was important to him: "Atmosphere. Let's say I'm going to swim for (big swim club) again and it's all 'Do this because I'm better than you' kind of atmosphere, not because you're here to improve, I'm not going to go." When asked what kind of

atmosphere he was looking for, he said, “A positive atmosphere. A successful atmosphere, you could say....And by successful, I mean...like if you beat your time, they champion you for that. They strive for success.”

Ashley confirmed that Desire to Excel was a factor in her commitment whether swimming competitively on a team or not. Shane suspected that the lack of competition might be detrimental, saying, “I think not competing...might have me get a little bit lazy, and less committed.” However, he still felt a desire to get better for the swim season next year. He also said, “I think this time it’s a bit more...personal, and not so much like a better time, but just wanting to get better at the sport, for myself.” Emily said, “Um, well, usually when I go outside of school, I still kind of train, so I’m always wanting to do better...sometimes it’s just leisure, but I can see that being part of my commitment to go.” Peter’s attendance record was definitely linked to his desire to excel, both during the school swim season and for summer club. He said, “I had this like, idea in my head that the more practices I showed up to, the better I would get, and the faster I would progress, so I was showing up to like 9 practices a week.”

When Tyler was asked if Desire to Excel was a part of his commitment to swimming, he said, “Definitely. That’s a main part of swimming is wanting to improve, so, that’s a big role. Especially if I was practicing outside of Parkside, it’s definitely like well, I have time. I should go practice and get better.” Neil said,

Um, well, I mean in anything, you’re always trying to get faster at doing it or completing it, so even just going to the pool and just every week, seeing that you’re, you can do more while feeling less tired and kinda that, that

feeling once you've realized you've gotten better...it's kind of something to work towards, I guess.

Megan considered swimming to be a means to an end, in a way, saying, "I think that goes a bit with my healthy lifestyle or my desire for a healthy lifestyle...I want to achieve excellence in my lifestyle, if that's a thing."

In summary, Desire to Excel was a source of strengthened commitment to swimming for seven of the participants, and Kris suspected that it would be important for him as well, if he were swimming with another team.

Team Tradition and commitment to swimming

Swimming: Team Tradition N=8					
Definition	The pride and honour of being a part of a team's history and the responsibility to maintain that history through high standards of performance and conduct.				
Hypothesized Relationship	Team Tradition strengthens commitment.				
Have Team Tradition	Derivation of Commitment Effect		Direction of Commitment Effect		
	Swimmer	Construct	Strengthen	Lessen	None
12.5% (1)	0% (0)	12.5% (1)	12.5% (1)	0% (0)	87.5% (7)
	Confirmed 0% (0 of 0)				

Figure 15. Team Tradition and commitment to swimming.

There were no quotes that really captured this construct in a swimming context for Figure 15 because this construct wasn't relevant for most of the participants. Emily and Peter both swam in summer club, and Emily felt that Team Tradition was a part of her commitment to swimming outside of Parkside. Peter, however, said, "Not as much; it was more personal for, for summer club."

He felt that he was focused on meeting his own high standards, rather than trying to live up to the team's reputation. Kris suggested that it could be important if he joined another team, saying, "I would need to know part of the team's history, like if all of their swimmers had gone to Olympics...I would be kinda disappointed because I know I wouldn't get to that level."

Other Priorities and commitment to swimming

Seven participants acknowledged having other priorities, but as shown in Figure 16, for three of these participants, Other Priorities did not have any effect on their commitment. Peter contrasted his experience on the Parkside swim team with his experience swimming during the summer: "That was definitely like, during swim team. Sometimes I would come home and I wouldn't have time to practice cello so I started doing it before, but since it was summer I still had quite a bit of time to do things." Ashley said, "Um, I think that if it was on my own time it wouldn't really interfere with soccer for me, so I don't think that applies. Neil answered, "Mmm...I wouldn't say so. Just because, like, I did say karate for the last one, but that' because like, with the school, it's on a daily basis, but I wouldn't say that swimming just for fun by myself would take away from anything."

Kris's main concern was traveling time. He didn't feel that he would be missing out on things by spending time swimming, but with a busy schedule of activities all over the city, extra traveling time would not be welcomed. He said,

I have to go all over the city...just for a normal day....Like I could take my weekend, for example; I live on the west side, I had to come to school

on the south side, perform drama, go back [home] on the west side, you know, it's Sunday, I had to go from the west side all the way to the north side to work...I have quite the trek already. So if I have to go to the east side to swim, it's going to be quite difficult for me to handle traveling so much.

Swimming: Other Priorities N=8 (Formerly Involvement Alternatives)					
"Once I'm there, I'm happy to be there, always. Like there's never a time where I want to go home. Um, it's just that getting there is the hard part...So other priorities stop me before I'm there." –Megan					
Definition	Other priorities that you may have in your life which swimming makes difficult, or maybe impossible, to do.				
Hypothesized Relationship	More attractive and/or pressing other priorities lessen commitment.				
Lead Up Question	Do you have other priorities in your life?				
Have Other Priorities	Derivation of Commitment Effect		Direction of Commitment Effect		
	Swimmer	Construct	Strengthen	Lessen	None
87.5% (7)	12.5% (1) Confirmed	37.5% (3) 100% (1 of 1)	0% (0)	50% (4)	50% (4)

Figure 16. Other Priorities and commitment to swimming.

Shane cited boxing and school work as activities that would take the place of swimming for him. Tyler said,

Definitely that would be work and school. It's hard after, even on the weekend, if I am working in the morning, it's hard to commit myself to going and swimming after when I'm just like, "Uh, I just want to be lazy," like I was up on my feet for eight hours, so it definitely is a negative impact on my commitment.

Megan said, “Once I’m there, I’m happy to be there, always. Like there’s never a time where I want to go home. Um, it’s just that getting there is the hard part....So other priorities stop me before I’m there.” Overall, Other Priorities had less of an impact on participants’ commitment to swimming because swimming on their own or in the summer would mean a more flexible schedule. However, some participants still had difficulties getting themselves to the pool.

Valuable Opportunities and commitment to swimming

Six participants named sources of commitment that fit with the definition of Valuable Opportunities, but one participant did not agree with that assessment, which is why confirmation is displayed as 83.5% in Figure 17. The other five participants confirmed that these had a strengthening effect on their commitment to swimming outside of Parkside.

Some participants appreciated social opportunities provided by swimming. For Emily, regular swim times with her dad allowed them to catch up:

Afterwards we’ll like go and get a coffee and stuff and like, we just get to talk and stuff because he works—like sometimes I won’t see him ‘cause I’m up in my room studying, so it’s nice because we get to talk to each other and stuff and see how things are going, so it’s good.

She also said,

Like with my job as a swimming instructor, I go to the same pool that I teach at, so it kind of gives me time to bond with like the lifeguards and everyone else, so it’s good for that, and making um, acquaintances, I guess you would call it, at the pool.

Having these acquaintances then further strengthened her commitment to swimming: “If I know that I’m going to see people, I know when I’m swimming that like, it’ll give me another reason to go and just, you know, just see how things are going and stuff.” Peter listed off numerous valuable opportunities obtained through his summer swimming: Cupcakes, swim meets, pool time, bubble tea, and being able to socialize with different people—people that he only saw at the pool.

Swimming Valuable Opportunities N=8 (Formerly Involvement Opportunities)					
“I’ve noticed that on mornings that I swim, compared to mornings I don’t swim...I’m a lot more focused on school; I just generally am happier, generally just have a better day....so knowing that the pool is open in the morning for just free swim, I’ll definitely come back, every morning I think; I’ll keep at it.” –Tyler					
Definition	Valuable opportunities you may have which you would miss if you were no longer swimming.				
Hypothesized Relationship	Valuable Opportunities strengthen commitment.				
Lead Up Question	What valuable opportunities do you have like this—any?				
Have Valuable Opportunities (N=8)	Derivation of Commitment Effect		Direction of Commitment Effect		
	Swimmer	Construct	Strengthen	Lessen	None
100% (8)	75% (6) Confirmed	0% (0) 83.3% (5 of 6)	62.5% (5)	0% (0)	37.5% (3)

Figure 17. Valuable Opportunities and commitment to swimming.

Tyler had a hard time thinking of valuable opportunities that would come from swimming without the Parkside team:

Um, I feel like that’s a lot with the team aspect as well, not so much as the swimming....I don’t feel like the swimming itself really has...uh, no, I

guess that's a lie because I really enjoy the swimming. It's weird trying to differentiate between swimming and swimming with a team, kind of thing. He decided, "I guess it would play a role because if I wasn't swimming, I wouldn't realize that I enjoyed swimming so much, and I would be missing out on that," and agreed that the enjoyment that came from swimming was something of value to him.

Tyler also identified the exercise element of swimming as something valuable enough to strengthen his commitment, saying,

I've noticed that on mornings that I swim, compared to mornings I don't swim...I'm a lot more focused on school; I just generally am happier, generally just have a better day....so knowing that the pool is open in the morning for just free swim, I'll definitely come back, every morning I think; I'll keep at it.

For Ashley and Peter, swimming provided valuable opportunities for fitness that improved their performance in other sports. Ashley said,

It helps me all around, like it's um, helped me get a lot stronger, like especially in my arms and then, yeah, just my fitness and then that helps me with soccer as well so it's like a double win.

Peter said, "I definitely feel better with running after um, swimming during the summer than I did before, at the beginning of last year, 'cause I think it helped out with um, the breathing aspect and things like that." Megan noted, "The desire for a healthy lifestyle is for sure part of it, because swimming is something that you can do for the rest of your life, even if you're injured."

Neil and Megan identified some other valuable opportunities provided by swimming. Megan said, “It’s also kind of a life skill...If your boat crashes or something, like, oh, you can survive for a couple more minutes than the average person.” Neil found that this fact motivated him to keep swimming, for the sake of his family:

I guess my parents, they never learned to swim, but I guess because of me and my sister, they want to do it as well...I guess actually, that would be a thing to keep swimming, just to convince other people in my family to swim as well.

Neil was also motivated to continue swimming by the opportunity to take up a new pastime:

“I’ve always wanted to scuba dive, so I guess swimming...would play a role in achieving that...I’ve been going to aquariums for probably as long as I’ve been swimming as well, and it’s just so fascinating, like the whole world under the sea, so like, just to get up close without having to worry about like, air...I just find it so fascinating how you could have these gigantic animals just like hanging out there and just to see them like not on a screen, but in real life, I just think that would be so cool.”

Megan said,

If I were to ever go on a vacation, like I said, we could go scuba diving, um, or often, like my youth group will go to events as the water park or something and like, being able to swim—if you can’t swim you shouldn’t go off the deep end slides so like it opens doors for that, for sure, and then

also, I really want to learn to surf, like that's like a life goal, so I can't surf if I can't swim, so, basically, yeah. Swimming allows you to do stuff like that.

Emily thought of another more practical opportunity stemming from swimming: "Outside of Parkside, there's a lot of opportunity with your swimming, like you can become a lifeguard or swimming instructor, so that's definitely an aspect."

Megan had the same thought, saying, "My friend's a swim instructor; actually I have a lot of friends...A lot of friends in that." Emily found that her job as a swim instructor also increased her commitment to swimming:

When I'm just swimming on my own time, I find, like I can think of new things to do with my kids and stuff and I can try them out to see if they're going to work and also I can—like I find if you're an instructor and you don't know how to do your strokes properly, like I've been with people that are like, it's not good, then it's a problem, so usually I just like to practice the ways that I teach the kids how to swim so that if I have to demo, I can.

In summary, the participants identified many valuable opportunities, and for most, this construct was a source of strengthened commitment to the sport of swimming.

Sport Enjoyment and commitment to swimming

All eight participants indicated that Sport Enjoyment strengthened their commitment to swimming. As seen in Figure 18, four participants mentioned

“fun” or “enjoyment” unprompted, and the other four participants offered and later confirmed several sources of commitment as also being sources of enjoyment.

Swimming: Sport Enjoyment N=8					
“I definitely like the sport itself. I think just getting in the pool it can be kind of relaxing. It’s just a bit of a change of pace...it’s not just the people that make it fun, it’s the sport itself.” –Shane					
Definition	The positive feelings you may have about swimming such as pleasure, fun, liking, or loving the experience.				
Hypothesized Relationship	Sport Enjoyment strengthens commitment.				
Background Questions	What has been the most important thing that’s kept you swimming with the Parkside Panthers this season/for all these seasons? What have you found most enjoyable about swimming with Parkside, specifically?				
Lead Up Question	If you were to rate your enjoyment for swimming on a scale from 1 to 7, what would it be?				
Have Sport Enjoyment	Derivation of Commitment Effect		Direction of Commitment Effect		
	Swimmer	Construct	Strengthen	Lessen	None
100% (8)	100% (8)	0% (0)	100%	0%	0%
	Confirmed 100% (8 of 8)				

Figure 18. Sport Enjoyment and commitment to swimming.

The mean rating of enjoyment was slightly lower than it was for swimming with Parkside: 5 out of 7. Tyler said, “It’s weird once you go down to just swimming itself, ‘cause a lot of my commitment to swimming it based off of its social aspects, so swimming by myself doesn’t seem as good, but I still would.” When asked to rate his enjoyment of swimming, he said, “I would say probably about a 5, so a little bit less because I don’t have that team experience, but it’s still quite enjoyable.” Shane said, “I definitely like the sport itself. I think

just getting in the pool it can be kind of relaxing. It's just a bit of a change of pace." He continued, "So it's not just the people that make it fun, it's the sport itself." Emily said, "I like going just for fun because I can do anything I want, so that's definitely nice."

Ashley said, "It's just a sport that I really like, and I don't know like exactly what it is, like maybe it is that it's relaxing, but yeah...there's just something about like, being in the pool that I really like." She explained, "At Parkside it's like when I'm just warming up, like it's just like the feeling of being in the pool and like...it's really quiet and just, it's kind of like away from noise and like, yeah. That's why I find it relaxing." Kris also picked up on the quiet aspects of swimming, saying,

For some reason, I don't know why, I enjoy the experience of going under and seeing how far you can go. Like it's—if you've ever been in a quiet pool and just gone to the bottom and sit [sic], like if you can really just let that air relax inside of you and just sit down and look around and realize you're not hearing anything—you could be hearing like some clicks, some splashes—but really it's silent...I've gone diving before, and that's one of the enjoyments....I had an amazing time just listening to complete silence. Tyler described swimming as being "almost like weightless, yeah, and it's just a fun sport." He continued,

It's different than other sports. It's a different element. It uses different muscles; it uses different mind-set and everything, you know; having to actually hold your breath underwater is quite different than like running,

per se, so it's just—I think what makes it unique makes it enjoyable at the same time.

For Peter, the enjoyment came from people. He said,

In summer club we were kind of like a mini-family. We were all pretty close...I'd usually get there half an hour early and just have random conversations and just do warm up and everything...those were usually experiences that I associated with swimming and made me want to come back...We had lots of random team things, so every Tuesday we would just go to bubble tea after practice. We would all just hang out for an hour or two.

Kris described his ideal swim setting as having a positive atmosphere. He said, “If they only focus on the negatives then you're not going to have a good time...If I'm going to enjoy, it's going to come from a positive atmosphere.”

Megan also found enjoyment in people—her family, as described in Social Support, and the regulars at the pool by her house. She said,

Yeah, so I think there's, like you said, a sense of familiarity, um, and people are just nice, like they're friendly, they smile, they're generally pretty happy, um, yeah, so I think that really contributes to my personal—because I like being in good atmospheres where people are happy and the pool is somewhere where people are almost happy.

Another source of enjoyment for Megan (more so when she was younger) were the various entertainments available. She said,

For example, I'll go to the pool and like, I'll want to, I don't know, jump off the rope or something, this is mostly in the past, but like I'll jump off the rope or dive a few times and sit in the hot tub and stuff, but then I think like, "Oh, I'm here. I'll swim some lengths too and actually practice swimming, swimming....Or like if I'm really cold some days, like I'll think "Oh, the hot tub is gonna be so nice" but then I'm there, keyed up and I'm like, "Ok, I guess I need to cool off, like there's a lane right there, guess I'm swimming!"

To summarize, all eight of the participants considered enjoyment to be a strengthening factor in their commitment to swimming outside of Parkside. When considering factors that might lessen his commitment, Neil said, "I can't think of anything that would take me away from swimming. Maybe if I was pushed too hard by a swim coach that I just start to forget like, how much fun I had." I asked Emily about her future plans for swimming, and she said, "I'm probably going to swim for (summer swim club), unless or some reason I can't, and I hope that's not the case, cuz (summer swim club) is so fun." For some participants, enjoyment was lessened slightly due to the lack of team atmosphere, but the sport itself, the feeling of being in the water, was still considered to be very enjoyable.

Chapter 6: Discussion

Changes in Physical Activity over Time

There were no significant differences found between the pre-season (Time 1), mid-season (Time 2), and post-season (Time 3) physical activity scores when looking at the group as a whole, sorting by gender, or sorting by grade. However, when I performed a median split based on physical activity levels at Time 1, putting half of the participants into a high activity subgroup and half into a low activity subgroup, a statistically significant difference emerged between the Time 1 scores and Time 3 scores of those in the high activity subgroup, showing a decrease in physical activity scores. T-tests also showed an increase in physical activity scores from Time 1 to Time 2 and Time 1 to Time 3 in the low activity group that approached significance.

When these high and low activity subgroups were divided by gender, a repeated measures ANOVA showed a significant increase in the physical activity levels of less active boys from Time 1 to Time 3, and the increase from Time 1 to Time 2 approached significance. T-tests identified a significant difference between Time 1 and Time 3 and also between Time 1 and Time 2.

In summary, those in the high activity group experienced a drop in their scores from the pre-season to the mid-season, while the scores of those in the low activity group increased. One possible explanation for this is a simple regression towards the mean. An alternative explanation is that the highly active participants had to lower their activity levels once school started and they were forced to spend more time sitting in class and doing homework. For those who were less

active at the start, the Parkside swim team provided a fun, social, convenient way to get physical activity. This participation in after-school sport may have also increased their overall physical activity levels as observed by Pelclová et al. (2010).

Overall, there is some evidence to suggest that participation in high school swimming may increase physical activity in less active adolescents, especially males, but this hypothesis would be better tested with a larger sample size and more objective measures of physical activity, rather than self-reported measures. A control group would also be beneficial in determining the actual contribution of high school swimming to overall physical activity.

Relationship between Sport Commitment and Physical Activity

The results contradicted this hypothesis, finding no significant relationship between commitment to high school swimming and physical activity at Time 2 or Time 3 for the group as a whole. This is not entirely surprising, as the commitment being measured is a psychological construct. A swimmer may be very committed to their high school swim team, but other obligations such as school and work may prevent them from attending more than one or two practices per week. Others may be sidelined by injury. Still others may take more of a coaching role at practices, rather than being physically active in the pool. Another explanation for these results is that, rather than adding swim practices to their other physical activities, participants simply replaced other physical activities with swimming.

It should also be noted that, while Casper et al. (2007) found that psychological commitment accounted for 16% of participation frequency in adult recreational tennis players, Weiss et al. (2010) found essentially no relationship between psychological commitment and behavioural commitment in female adolescent gymnasts. The relationship between psychological commitment and behavioural outcomes may be more pronounced for adults, who generally have more autonomy, than for youth, who might need parental permission or a ride to practice. In short, there are many factors that may affect the translation of psychological commitment into behaviours.

Participants in Grade 12 were in the only sub group that experienced a significant (positive) relationship between sport commitment and physical activity at Time 3. It is possible that, while participants in Grade 10 and Grade 11 stopped swimming and moved on to other activities after the season ended, the most committed participants in Grade 12 (many of whom had swam on the team for three seasons) were motivated to continue training on their own, thus resulting in higher physical activity scores.

Determinants of Sport Commitment

Sport Enjoyment

Sport Enjoyment had a stronger relationship with commitment to Parkside than any other construct, and this held true for the overall sample and every subgroup. Contrary to sub hypothesis 3.1, there was a significant difference between these correlations for those with prior competitive swimming experience ($r = .500, p < 0.05$) and those without prior experience ($r = .803, p < 0.01$). This

underlines the importance of providing an enjoyable high school swimming experience to those who are new to the sport.

All eight interview participants reported high levels of enjoyment. They indicated that Sport Enjoyment was an important factor that strengthened their commitment to swimming with Parkside, and while enjoyment did stem from some other Sport Commitment Model constructs, there was still insufficient justification for an enjoyment-mediated model. Similar to Scanlan et al.'s (2009) qualitative findings, participants identified sources of commitment that were not related to enjoyment.

Participants described enjoyment stemming from the sensations associated with swimming, like the feel of the water, the muffling of sounds, and the physical exertion. Enjoyment also came from the feeling of accomplishment following a tough set, and the knowledge that they were doing something beneficial to their health. People were a significant source of enjoyment, and this was linked to the valuable opportunities for social interactions with people who may not have become friends otherwise. Finally, Team Tradition was found to be an important source of enjoyment—the overall “team vibe” and the sense of belonging and being a part of something bigger than themselves.

Other Priorities

The negative relationship between Other Priorities and sport commitment was significant. The mean for Other Priorities was significantly higher for participants in Grade 10 compared to participants in Grade 12, which may

indicate that more participants in Grade 12 have chosen swimming as their preferred activity while younger participants are still weighing their options.

Other Priorities had a significant negative relationship with commitment for participants in the low activity subgroup and for participants with prior competitive swimming experience, but not for those in the high activity subgroup or for those without prior competitive swimming experience. It has been suggested the impact of Other Priorities becomes more significant when the time commitment required by the sport is more substantial. For an activity like this, where swimmers may choose to attend as infrequently as one practice per week, it is not as likely to have to compete with alternative activities.

While the items on the sport commitment questionnaire referred to “attractive alternatives,” the definition used for the interviews was broader and took into account obligations such as school and work. As a result, all eight interview participants acknowledged having other priorities, and all but one stated that these other priorities lessened their commitment. Other priorities made it harder for participants to attend swim practices regularly. However, only one participant felt that he was missing out on an attractive alternative by swimming so often. Most of the participants enjoyed their time in the pool and expressed a desire to swim more often.

Social Constraints

There was no significant relationship between Social Constraints and sport commitment, which is consistent with **past findings of weak or non-significant relationships between Social Constraints and sport commitment for young athletes**

(Scanlan, Carpenter, et al., 1993; Scanlan, Simons, et al., 1993; Sousa, Torregrosa, Viladrich, Villamarín, & Cruz, 2007).

In the interviews, five participants acknowledged feeling some sense of obligation to keep swimming due to other people's expectations, but only two considered it to have any effect on their commitment. Both of these participants felt that the coaches' expectations had a positive effect on their commitment, especially when taking into account the amount of time and effort that the coaches invested into the team. Overall, however, this was found to be a very minor factor in participants' commitment.

Valuable Opportunities

Valuable Opportunities was also significantly positively correlated with commitment to Parkside for the overall sample and each subgroup except for Grade 12. This is likely due to lack of variance in the responses for participants in Grade 12. There were no other differences found between sub groups for Valuable Opportunities.

All of the interview participants identified a variety of valuable opportunities, but two did not feel that these had any impact on their commitment. For the remaining six, valuable opportunities strengthened their commitment. While the questionnaire items included friendships, good times, and team membership, additional valuable opportunities identified during the interviews included the easily accessible facilities, accountability, and high quality coaching which helped participants reach their fitness goals. Participants also appreciated the opportunity for competition.

Personal Investments

The Cronbach's alpha for Personal Investments was low (.64); removing the item about money resulted in a small increase (.69), but left only two items for that construct. While it is preferable to use three or more items to identify a latent factor, (Newcomb, 1990), combining two items to form a factor is still acceptable, so these items were summed and retained as other researchers have done in the past (Carpenter & Scanlan, 1993).

An independent samples t-test confirmed that the mean for Personal Investments was significantly higher for males than for females. Gender differences have not been identified for Personal Investments in a youth sport context, but this finding was consistent with Wigglesworth, Young, Medic, and Grove's (2012) study of masters swimmers, and was contrary to the gender difference found in adult recreational tennis players by Casper and Stellino (2008). Personal Investment scores also increased significantly from Grade 10 to Grade 11 and from Grade 11 to Grade 12. Personal Investments was significantly positively correlated with commitment to Parkside for the overall sample, for males, for females, and for students in Grade 11. The lack of correlation to commitment for students in Grade 12 may again be due to a lack of variance in their ratings of Personal Investments.

Over the course of the interviews, seven of the eight participants confirmed that they had made investments, such as time and money, but only three participants (all male) found these investments to have an effect on their commitment. Two of these three participants mentioned money on their own,

unprompted. Both of these participants were in Grade 12, so it makes sense that they would be spending more of their own money on things like team fees, clothing, and equipment, versus younger participants whose parents likely pay for more. The overwhelming consensus when it came to the investment of time was that it was voluntary, and that it was worth it—even if they left the team, they wouldn't consider it to have been wasted. This suggests that the positive correlation found between Personal Investments and commitment is a consequence of committed swimmers investing greater effort and time into their swim team—not the other way around.

Social Support

The scale for Social Support did not have sufficient reliability and was not used for any analyses. Carpenter (1992) hypothesized that several sub-components would emerge rather than a single social support factor, because it is entirely possible to be supported by teammates and not parents, for example. This is likely what happened here.

When I examined the means for individual Social Support items, friend support received the lowest rating and teammate support was rated highest overall. Participants in Grade 12 gave significantly higher ratings to friend support and team support than participants in Grade 11 and Grade 10, respectively, likely due to the additional time they have had to solidify friendships within the school and swim team.

Within the interviews, it was made clear that Social Support was an important source of commitment. All eight participants identified social support

as a positive source of personal commitment, with six of them referring to the concept without prompting. Weiss et al. (2001) quantitatively examined several categories of social support from four different sources: parents, coach, teammates, and best friend. Similar categories of social support emerged in the interviews: emotional, instrumental, and companionship. Emotional support came mostly from teammates (especially captains) and coaches in the form of verbal encouragement and expressions of caring. Instrumental support came mostly from the coaches, helping swimmers reach their goals, but captains and teammates also provided assistance with stroke development. Companionship support was present during both practices and competitions. Participants described the strength and confidence that comes from belonging to a team and the motivation that is added when swimming a tough set alongside teammates.

Desire to Excel

Desire to Excel was the strongest of the new candidate constructs that emerged through the qualitative PEAK study. Player-derived sources of commitment that did not match existing SCM constructs were analysed inductively, and this was one of the resulting themes (Scanlan et al., 2013). As scale development was beyond the scope of my research, I did not attempt to measure this construct quantitatively. Instead, I used Scanlan et al.'s (2013) definition of Desire to Excel in my qualitative data collection and analysis.

All eight of the interview participants confirmed that their desire to excel strengthened their commitment to the Parkside swim team, though for some the effect was more pronounced than for others. Six participants brought up the

construct on their own, saying that competition or the pursuit of personal achievements strengthened their commitment. For many of them, this striving for excellence was evident throughout their lives, and swimming was considered to be a part of the healthy, balanced lifestyle they hoped to attain.

Team Tradition

Team Tradition was another new candidate construct from the PEAK study that I did not attempt to measure quantitatively. All eight interview participants cited Team Tradition as a source of commitment, and two of them mentioned this on their own, unprompted. The other six readily accepted it when the construct was introduced. All participants said that they found that it strengthened their commitment, but two participants found that it also lessened their commitment at times, due to the pressure of having to maintain a very long winning streak. This almost seems like another form of Social Constraints; while the expectations of individuals did not appear to have much impact on commitment, membership on a team with a well-established history of success at city championship meets had an adverse impact on commitment.

While Scanlan et al. (2013) identified this construct within the context of team sports, one of the themes that came through very strongly in the interviews was the notion of swimming as a team sport. Participants repeatedly made statements to the effect of, “People may think of swimming as an individual sport, but at Parkside, we’re a team.” This team aspect and the pervasive team spirit were identified as a major source of enjoyment and strengthened commitment.

High School Swimming and Commitment to the Sport of Swimming

From the demographic questionnaire, I determined that 20 participants (13 males and 7 females) had no prior competitive swimming experience when they joined the Parkside swim team. These participants demonstrated high levels of commitment both to the Parkside swim team, equal to that of participants with prior experience. Five of these 20 participants were in Grade 10, seven were in Grade 11, and eight were in Grade 12. Of the Grade 11 and 12 participants, six were on the team for the second season in a row, and five were participating in their third season on the team. At least two Grade 12 participants showed great enthusiasm for swimming with the team, but were new to the school, and thus had not had the opportunity for more than one season on the team. Two of the 20 participants joined a summer swim club following their participation with the Parkside swim team.

During my interviews, I inquired as to participants' intentions in terms of continued participation in the sport of swimming. Five of the interview participants had no prior competitive swimming experience when they joined the Parkside swim team. Two of these participants were in Grade 11, and both expressed a desire to swim with Parkside again in Grade 12. The other three were in Grade 12. All of them planned to continue swimming, whether on their own or with another club (competitive or recreational). Two of the five were already in the habit of swimming recreationally with family, but the other three had not done much swimming at all prior to joining the Parkside swim team. These findings

suggest that high school swimming may indeed foster commitment to the sport of swimming for new participants.

However, participants also mentioned some positive sources of commitment that were present for them in the context of the Parkside swim team, but not for commitment to the sport of swimming. For example, participants experienced significantly more social support for swimming with Parkside than for swimming on their own, outside of Parkside. Team Tradition, which was an important source of commitment for all eight of the participants was another construct that they wouldn't experience when swimming on their own or just with a friend. Some participants considered the coaching and easily accessible facilities to be valuable opportunities that they would miss when they left the team. Team Tradition, Social Support, and opportunities for competition (related to Desire to Excel) were also cited as sources of Sport Enjoyment. If students are to continue swimming after high school, it is important to provide them with opportunities to still be a part of team in a social, non-threatening environment.

Limitations:

One limitation of this study was the sample size. While this study was unique in that it employed mixed methods to study sport commitment, the small sample size limits the generalizations that can be made from the quantitative data, and I feel that more purposeful sampling would have allowed for further exploration of my second research question, investigating the relationship between commitment to Parkside and commitment to the sport of swimming. Another limitation was that not all data were normally distributed, although one

would expect to find relatively high levels of enjoyment and commitment in an informal, voluntary activity such as this. Physical activity was self-reported and required some recall, which likely had a negative impact on the validity of those data. There were also a few problems with the measurement of some of the constructs on the sport commitment questionnaire, as noted earlier.

Strengths:

While Scanlan et al. (2003) consider the PEAK study to be an example of mixed methods, having included a small amount of quantitative data in the results, I believe taking things a step further and combining interviews with questionnaires can be an effective method of exploring sport commitment within larger, more heterogeneous populations. By using the questionnaires, I was able to measure the relative strength of relationships between the constructs and sport commitment, as well as make comparisons between groups.

An advantage of combining questionnaires with interviews was that I was still able to obtain data when there were problems with items on the questionnaire. For example, while removing the item about money resulted in an improvement to the scale for Personal Investments, in my interviews, two participants stated that investing money in team clothing and equipment substantially strengthened their commitment to the team. I was also able to explore the impact of Social Support, Desire to Excel, and Team Tradition on commitment through the interviews, which I was not able to do with the questionnaires.

Another advantage to using the interviews was that rather than simply stating the relationships between various constructs and sport commitment, I was

able to examine things like the sources of enjoyment, and the types of opportunities that were valued by these participants. I discovered that participants highly valued the social support coming from coaches and teammates (especially captains). I heard again and again how participants were proud to be a part of the team. These findings would have been missed without the interviews.

Another strength of this study was the decision to study one team (the team most successful in recruiting large numbers of swimmers) in depth, rather than trying to collect data from several schools on my own. The hours that I spent on the pool deck at Parkside allowed me to verify questionnaire and interview results with my own observations. I was also able to build rapport with the swimmers that improved my interviews. Choosing Parkside meant that I was looking at a program that was doing something right, and from there I could identify characteristics for other programs to emulate.

Future Research:

To my knowledge, this is the first study of high school swimming in Alberta, and I believe there are many more interesting issues to explore in this sport context. For example, because the Parkside swim team has a favourable reputation within the school and a long history of winning city championships, it would be interesting to see if the same levels of commitment and the same determinants of commitment are found in swimmers on smaller high school teams that do not rank so highly. As physical inactivity continues to be a problem for adolescent populations, it could also be valuable to conduct a larger scale

investigation into the impact of high school swimming on physical activity levels of students over the school year, using accelerometry and a control group.

In the interviews, many of the participants expressed that they found it difficult to swim on their own, without a coach telling them what to do and teammates swimming alongside them, providing accountability. It would be interesting to run a longitudinal intervention study where half of the high school swim teams are partnered up with masters swim teams and the other high school teams are left as a control group. Coaches from the masters teams could come into high schools and run practices occasionally, and high school students in Grade 12 could be invited to attend a masters practice and social event. Commitment and swimming frequency could be measured in Grade 11, Grade 12, and then again one year and two years after graduation, comparing the intervention group to the control group.

In terms of the Sport Commitment Model, as stated earlier, I believe the use of questionnaires and interviews in combination is very useful, and this combination should be applied to the study of other populations. Observation and document analysis are two other forms of data collection that could add another dimension to sport commitment studies. The two new candidate sources of commitment that were explored in this study, Desire to Excel and Team Tradition, proved to be very applicable to this sample of non-elite high school swimmers, despite coming from a study of elite adult athletes in a team sport context. Team Tradition, in particular, deserves more study, especially within individual sports. Considering its importance for this high school swimming population, it would be

good for other programs to know more about how to foster Team Tradition, especially when there is not already a long history of success.

Implications:

The Parkside swim team exemplifies almost all of the positive attributes one could hope for in a program meant to encourage participation and foster sport commitment in adolescents who are not adequately active. In analysing my data, not only did I learn about the characteristics of my participants, but I also uncovered the characteristics of their high school swimming program that made the team so successful in attracting and retaining a large and diverse group of committed students.

I would recommend that other high schools focus on the following key points in order to foster commitment to their teams:

- 1) Coaching is crucial. In my study, coaches substantially contributed to Valuable Opportunities and Social Support (instrumental and emotional). Participants stated that they valued the expertise of their coaches and felt that they were receiving very high quality coaching at a low cost. The coaches were deemed important in helping participants to achieve their health, fitness, and swimming-specific goals. While not all schools have teachers with backgrounds in competitive swimming, an effort should be made to obtain at least basic training in competitive swim coaching. Participants also reported that they felt that the coaches cared about them as people, not just as athletes. This

was evident when they learned their names quickly, greeted them outside of practice, and asked them about their day.

- 2) Encourage positive social interactions. These social interactions were a part of Valuable Opportunities and Social Support. Participants valued the opportunity to meet new people, especially those who they would not normally associate with. Ice breakers and group activities within practice got people talking to each other and helped to break down barriers between various social groups. Social events outside of practice and competition were much anticipated and well-attended. Overall, there was an atmosphere of encouragement and acceptance. I never observed any judging or shaming based on swimming ability or other factors. Instead, teammates were a major motivating factor in coming to practice. These social interactions were an important source of enjoyment for participants.
- 3) It's all about the team! It was stated during the interviews that everyone wants a chance to belong and to be a part of something bigger than themselves. The inclusive nature of Parkside's swim team afforded everyone that opportunity. Some participants joined after being cut from other sports teams, while others lacked self-confidence to even try out for anything else. Some of the specific practices I observed that could encourage Team Tradition include
 - a. Having a team cheer at the end of every practice

- b. Setting a team goal that is achievable and not dependent on the results of other teams
- c. Carrying on traditions from one year to the next such as having a “drag practice” (swimming with clothes on—often crazy-looking outfits!), going out for a pasta dinner the night before a big meet, and having a pancake breakfast for those attending morning practices.
- d. Emphasizing anniversaries. Parkside’s team experienced an increase in numbers when they approached their 25th consecutive championship win. Other schools could make a big deal out of their 10th or 15th year as a swim team to encourage students to be a part of a legacy.

Again, participants experienced enjoyment resulting from Team Tradition.

- 4) Provide opportunities for monetary investment. Data from the questionnaire and interviews confirmed that, especially for participants in Grade 12, spending their own money on team fees, clothing, and equipment strengthened their commitment. Schools can sell hoodies, sweat pants, swim bags, swim caps with fun logos, etc.

The suggestions above may also be applicable for programs other than swimming. An additional element that I would recommend for individual sports that is already in place for high school swimming is that athletes’ rankings are converted into points and added up so that the medals or trophies go to the highest

ranking teams, not individuals. During the interviews, participants remarked on how competing as a team took some of the pressure off of them. They knew that even if they had a bad race, there was no need to dwell on it, as they had plenty of teammates who could still do well and bring up the team's score.

Because high school swimming has such a short season, there may be an opportunity for year-round swim clubs to provide programming from January until May or June. Any club that attempts to offer such programming should pay close attention to the points above. Participants who had previously participated in competitive swimming with a club reported a lack of enjoyment due to the repetitive nature of practices and the emphasis on competition.

From a theoretical standpoint, the Sport Commitment Model proved useful in studying commitment with this population. At the conclusion of one of my interviews, the participant asked me about the origins of the SCM constructs. After I explained, she said, "I found they were really applicable, like even if not for me, like I found I could see my friends being affected by them for sure."

In summary, this study was successful in using a combination of questionnaires and interviews to explore the workings of a successful high school swimming program. Ironically, the program characteristics that I revealed through my months of research are already posted on their website:

The secret to our success? It's not all about winning. We have almost 200 students on our swim team because they have fun. We welcome all members regardless of swimming ability. We find that if students feel good about being on the swim team, they will come to practice with

enthusiasm and we can coach them to become better swimmers. They will get excellent coaching and mentoring from the many former swim team members who come back to help coach. By being on the [Panther]'s swim team, all members will get exercise and be more fit. They get to meet and become friends with lots of new people, and they will be proud to be members of this amazing team with its incredible tradition. (Strathcona High School, n.d.)

What a perfect example of truth in advertising!

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Appendix A

Physical Activity Questionnaire for Adolescents (PAQ-A)

We are trying to find out about your level of physical activity from *the last 7 days* (in the last week). This includes sports or dance that make you sweat or make your legs feel tired, or games that make you breathe hard, like tag, skipping, running, climbing, and others.

Remember:

- A. There are no right and wrong answers—this is not a test.
- B. Please answer all the questions as honestly and accurately as you can—this is very important.

Grade: 10 11 12 **Gender:** M F **Last three digits of student ID #:** _____

1. Physical activity in your spare time: Have you done any of the following activities in the past 7 days (last week)? If yes, how many times? (Check only one box per row.)

	No	1-2	3-4	5-6	7 +
Skipping					
Rowing/canoeing					
In-line skating					
Tag					
Walking for exercise					
Bicycling					
Jogging or running					
Aerobics					
Swimming					
Baseball, softball					
Dance					
Football					
Badminton					
Skateboarding					
Soccer					
Street hockey					
Volleyball					
Floor hockey					
Basketball					
Ice skating					
Cross-country skiing					
Ice hockey/ringette					
Other:					

2. In the last 7 days, during your physical education (PE) classes, how often were you very active (playing hard, running, jumping, throwing)? (Check one only.)

I don't do PE	
Hardly ever	
Sometimes	
Quite often	
Always	

3. In the last 7 days, what did you normally do **at lunch** (besides eating lunch)? (Check one only.)

Sat down (talking, reading, doing schoolwork)	
Stood around or walked around	
Ran or played a little bit	
Ran around and played quite a bit	
Ran and played hard most of the time	

4. In the last 7 days, on how many days **right after school**, did you do sports, dance, or play games in which you were very active? (Check one only.)

None	
1 time last week	
2 or 3 times last week	
4 times last week	
5 times last week	

5. In the last 7 days, on how many **evenings** did you do sports, dance, or play games in which you were very active? (Check one only.)

None	
1 time last week	
2 or 3 times last week	
4 or 5 times last week	
6 or 7 times last week	

6. On the last weekend, how many times did you do sports, dance, or play games in which you were very active? (Check one only.)

None	
1 time	
2-3 times	
4-5 times	
6 or more times	

7. Which **one** of the following describes you best for the last 7 days? Read **all five** statements before deciding on the **one** answer that describes you. (Please circle A, B, C, D, or E.)

- A. All or most of my free time was spent doing things that involve little physical effort
- B. I sometimes (1-2 times last week) did physical things in my free time (e.g., played sports, went running, swimming, bike riding, did aerobics)
- C. I often (3-4 times last week) did physical things in my free time
- D. I quite often (5-6 times last week) did physical things in my free time
- E. I very often (7 or more times last week) did physical things in my free time
8. Mark how often you did physical activity (like playing sports, games, doing dance, or any other physical activity) for each day last week.

	None	Little bit	Medium	Often	Very often
Monday					
Tuesday					
Wednesday					
Thursday					
Friday					
Saturday					
Sunday					

9. Were you sick last week, or did anything prevent you from doing your normal physical activities? (Check one.)

Yes	
No	

If Yes, what prevented you?

Thank you for your time!

Appendix B

Demographic Questionnaire**Some Information About Yourself**

1. **Last 3** digits of your student ID: _____
2. How old are you? _____
3. Gender (please circle one): **Male** **Female**
4. Grade (please circle one): **10** **11** **12**
5. Family background (please circle **all** that describe you).

a. Black//African-Canadian	d. Asian
b. White/Caucasian/European	e. Aboriginal
c. Hispanic/Latino	f. Other _____
6. Please circle the number that tells how old you were when you first participated in the sport of **competitive swimming** (not just swimming lessons).

3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18
7. Please circle all those years you have participated in competitive swimming. For example, if you swam when you were 5, 7, 8, and 9 years of age, circle only those years.

3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18
8. Were you a member of the Parkside Panthers swim team last year? **Yes** **No**
9. Were you a member of the Parkside Panthers swim team the year before that?

Yes **No**
10. On average, how many Parkside Panthers swim practices do you attend each week?

11. Are you a part of any other aquatic activities, such as competitive swimming (with a club), synchronized swimming, diving, lifesaving sport, or water polo? If so, please list them, and indicate how many hours per week you spend in practice or competition for those activities.

Thank you for your time!

Appendix C

Sport Commitment Questionnaire Modified for Swimmers**Part I: What You Think and Feel About the Sport of Swimming**

These questions will ask about what you think and feel about swimming in general, whether on your own, with a friend, or in an organized program, like a club or team. Please read each question carefully, then circle the one number which best describes HOW YOU FEEL ABOUT THE QUESTION. Remember, there are no right or wrong answers. Please make sure you answer all of the questions. If you have any questions, please feel free to ask.

What do you think about continuing to swim?

	Strongly Disagree	Disagree	Neither agree nor disagree	Agree	Strongly Agree
1. I am dedicated to swimming on a regular basis.	1	2	3	4	5
2. It would be hard for me to quit swimming altogether.	1	2	3	4	5
3. I am determined to keep swimming on a regular basis.	1	2	3	4	5
4. I am willing to do almost anything to keep swimming on a regular basis.	1	2	3	4	5
5. I am proud to tell other people that I swim.	1	2	3	4	5
6. I want to keep swimming on a regular basis.	1	2	3	4	5

Part II: What You Think and Feel About Swimming with the Parkside Panthers

These questions will ask about what you think and feel about the things that have happened to you and that you have done while swimming with the Parkside Panthers swim team, from when you first joined the team up until right now. Please read each question carefully, then circle the one number which best describes **how you feel** about the question. Remember, there are no right or wrong answers. Please make sure you answer all of the questions. If you have any questions, please feel free to ask.

Section A: What do you think about staying with the Parkside Panthers swim team?

	Strongly Disagree	Disagree	Neither agree nor disagree	Agree	Strongly Agree
1. I am dedicated to swimming with the Parkside Panthers.	1	2	3	4	5
2. It would be hard for me to quit swimming with the Parkside Panthers.	1	2	3	4	5
3. I am determined to keep swimming with the Parkside Panthers.	1	2	3	4	5
4. I am willing to do almost anything to keep swimming with the Parkside Panthers.	1	2	3	4	5
5. I am proud to tell other people that I swim for the Parkside Panthers.	1	2	3	4	5
6. I want to keep swimming with the Parkside Panthers.	1	2	3	4	5

Section B: How much have you put into swimming with the Parkside Panthers?

	None	A Little	Some	Pretty Much	Very Much
1. How much of your time have you put into swimming with the Parkside Panthers this season?	1	2	3	4	5
2. How much effort have you put into swimming with the Parkside Panthers this season?	1	2	3	4	5
3. How much of your own money have you put into swimming with the Parkside Panthers this season for things like entrance fees or equipment (goggles, swimsuits, etc.)?	1	2	3	4	5

Section C: How attractive are your alternatives to swimming with the Parkside Panthers?

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Disagree	Strongly Disagree
1. Compared to swimming with the Parkside Panthers, there are other things I could do which would be more fun.	1	2	3	4	5
2. I would like to do something else <i>instead of</i> swimming with the Parkside Panthers.	1	2	3	4	5
3. Compared to swimming with the Parkside Panthers, there are other things I could do which would be more enjoyable.	1	2	3	4	5
4. Compared to swimming with the Parkside Panthers, there are other things I could do which would make me happier.	1	2	3	4	5
5. I would be happier if I was doing something else <i>instead of</i> swimming with the Parkside Panthers.	1	2	3	4	5

Section D: What things would you miss if you stopped swimming with the Parkside Panthers?

	Strongly Disagree	Disagree	Neither agree nor disagree	Agree	Strongly Agree
1. I would miss being a member of the Parkside Panthers swim team if I left.	1	2	3	4	5
2. I would miss my head coach if I left the Parkside Panthers swim team.	1	2	3	4	5
3. I would miss the good times I have had swimming this season if I left the Parkside Panthers swim team.	1	2	3	4	5
4. I would miss my friends on the Parkside Panthers swim team if I left the program.	1	2	3	4	5

Section E: How much do you enjoy swimming with the Parkside Panthers?

	Strongly Disagree	Disagree	Neither agree nor disagree	Agree	Strongly Agree
1. I enjoy swimming with the Parkside Panthers.	1	2	3	4	5
2. I am happy swimming with the Parkside Panthers.	1	2	3	4	5
3. I have fun swimming with the Parkside Panthers.	1	2	3	4	5
4. I like swimming with the Parkside Panthers.	1	2	3	4	5

Section F: Do you feel pressure to swim with the Parkside Panthers?

	Strongly Disagree	Disagree	Neither agree nor disagree	Agree	Strongly Agree
1. I feel I have to swim with the Parkside Panthers so that I can be with my friends.	1	2	3	4	5
2. I feel I have to swim with the Parkside Panthers to please my mom.	1	2	3	4	5
3. I feel I have to swim with the Parkside Panthers to please my dad.	1	2	3	4	5
4. I feel I have to swim with the Parkside Panthers to please my friends.	1	2	3	4	5
5. I feel I have to swim with the Parkside Panthers to please my head coach.	1	2	3	4	5
6. I feel I have to keep swimming with the Parkside Panthers so that people won't think I'm a quitter.	1	2	3	4	5
7. I feel I have to keep swimming with the Parkside Panthers because my parents have done so much.	1	2	3	4	5

Section G: Do you feel you are encouraged to swim with the Parkside Panthers?

	Strongly Disagree	Disagree	Neither agree nor disagree	Agree	Strongly Agree
1. I feel that my friends are supportive of my swimming with the Parkside Panthers.	1	2	3	4	5
2. I feel that my mom is supportive of my swimming with the Parkside Panthers.	1	2	3	4	5
3. I feel that my dad is supportive of my swimming with the Parkside Panthers.	1	2	3	4	5
4. I feel my teammates are supportive of my swimming with the Parkside Panthers.	1	2	3	4	5
5. I feel my head coach is supportive of my swimming with the Parkside Panthers.	1	2	3	4	5

Appendix D

SCIM Interview Guide Modified for Swimmers

Section I. Beginning the Interview

Introductory comments and informed consent:

Thanks for meeting with me! As I've mentioned before, my goal for this research study is to learn more about you and why you swim. I just want to remind you that everything is kept confidential and anonymous. Your name will not be used at any time. I might write something like, "This was said by a female student in Grade 11," but there wouldn't be anything more specific than that. If there are any questions that you don't want to answer, just let me know and we will move on. If there is something you don't remember, just tell me that, rather than guessing. I'm going to record this interview, because I don't trust my memory and handwriting. Is that alright?

Background questions to initiate descriptive conversation:

- I have always loved the water, but I didn't start swimming competitively until I was 17. What was your swimming experience before joining this team? How old were you when you began swimming competitively?
- What got you into swimming to begin with?
- When did you first begin swimming with the Parkside Panthers? How long have you been swimming for the Parkside Panthers?
- What is the most important thing that has kept you swimming with the Parkside Panthers this year/all these years?
- What do you find most enjoyable about swimming, in general? What do you find most enjoyable about swimming with the Parkside Panthers, specifically?

Section II. Commitment to the Parkside Panthers Swim Team

Bounding commitment and establishing a partnership:

It's clear that you have made a commitment to swimming with the Parkside Panthers swim team this season. I want to better understand, and I want you to better understand, your commitment to the Parkside Panthers swim team, and to the sport of swimming, and the things that create it for you. Here is why I expect that you will reach a better understanding of your own commitment. Through our discussion, we will work together to develop, and lay out on this board, your own personal picture of what creates your commitment to swimming with the Parkside Panthers, and then we will do the same for your commitment to the sport of swimming.

We will do this in 3 steps:

1. I will define commitment for you so that we make sure we are talking about the same thing.
 2. Next, I will ask you to discuss your sources of this commitment. I will help guide you through this discussion to reach as full an understanding of these sources as possible.
 3. Finally, I will show you some sources of commitment that other athletes have identified for themselves. You will get a chance to evaluate these to see if any of them should be added to your own picture of commitment.
- So when we have finished, we should have a very complete picture of what makes you committed to swimming for the Parkside Panthers. Do you have questions about where we are going with this interview—its general flow?

As you can see, there really can't be any right or wrong answers here, because we're talking about your own picture of commitment. Again, let me stress that your comments will remain confidential and anonymous. I ask only that you talk about what you really think and feel so that the picture here will be accurate and complete. If you feel uncomfortable doing this at any time during the interview, please just tell me and we will go on to the next thing.

Definition of commitment to the Parkside Panthers:

By commitment to the Parkside Panthers swim team I mean "Your desire and determination to keep swimming for the Parkside Panthers."

- Do you have any questions about what I mean by commitment?
- Does this definition make sense to you?
- Is there anything you would like to add to this definition?

Section III. Swimmer-derived Sources of Commitment to the Parkside Panthers Swim Team

Orienting instructions for swimmer-derived sources of commitment:

In discussing your sources of commitment, please keep two important things in mind:

First, please feel free to draw on any aspect of your Parkside Panthers swimming experience in identifying the causes of your commitment. Your sources of commitment could come from things or people both in and out of the pool. For example, your sources could come from practices, swim meets, social events with the team, relationships and interactions with people (such as your family, teammates, coaches, classmates or other friends), or from any other important part of your experience as a Parkside Panthers swimmer.

So when you are thinking about what your sources of commitment are—think big. Draw on your total experience as a Parkside Panthers swimmer.

The second point to keep in mind as we discuss the sources of your commitment is that there are two general types of sources that can operate at any given time: Those that strengthen your commitment, and those that lessen your commitment (chip away at it). So in discussing the causes of your commitment, please consider both kinds.

Swimmer-derived sources of commitment:

Thinking about your total Parkside Panthers swimming experience and things that can strengthen or lessen your commitment:

- What are the sources of your commitment to continue swimming?
- What creates or lessens your desire and determination to keep swimming?

[Probes]

- What other sources of commitment do you have?
- What (or who) else creates this commitment in you?
- Do you have any other sources of commitment? Remember, you can add sources at any time during the interview.

Effect of each swimmer-derived source on commitment:

Questions for each source:

- Does (Source) strengthen or lessen your desire and determination to keep swimming for the Parkside Panthers? Or does it do both?
- How does (Source) (strengthen and/or lessen) your commitment to the Parkside Panthers swim team?

[Probe]

- Are there any other ways in which (Source) strengthens (and/or lessens) your commitment?

Section IV. Construct-derived Sources of Commitment to the Parkside Panthers Swim Team

Instructions for construct-derived sources of commitment:

So what is developing here is your own, individual picture of commitment. Unprompted, you have identified these [point to board] as the causes of your commitment to keep swimming for the Parkside Panthers. To complete your picture, I will now present some additional items that some athletes in the past have identified as sources of their own commitment. Some athletes think all of these are causes of their commitment, some think none of these are sources, and some athletes think some items are and some items are not sources of their commitment. So again, there are no right or wrong answers here. I just want to get your evaluation of whether any of these items are sources of your commitment.

To do so, I will define each item, ask you some questions about it to see what it means to you, and then ask you to evaluate whether it is important enough to include in your own picture of commitment. It is possible that you might have already mentioned some of these items. If so, just say so. I will be on the lookout for this, too. Again, please think about all aspects of your Parkside Panthers swim team experience as you discuss these items. Do you have any questions about what we will be doing?

Lead-up questions specific to each SCM construct:

Sport enjoyment:

- Considering everything, things both on and off the field: How much do you enjoy swimming for the Parkside Panthers? (1-7 Likert scale)

Valuable opportunities:

- What valuable opportunities do you have like these, any?

Other priorities in your life:

- Do you have other priorities in your life?
- What other priorities in your life do you have?
- What choices have you made about this priority (these priorities) and playing for the Parkside Panthers?

Investing personal resources:

- What have you invested that you can't recover if you leave the team?

Feeling obligated:

- Do you feel a sense of obligation to keep swimming for the Parkside Panthers because of the expectations of other people?
- Whose expectations are most important to you?
- What expectations do these people have?

Feeling encouraged and supported:

- Do you feel encouragement and support from other people for swimming with the Parkside Panthers?
- Whose encouragement and support are most important to you?
- How do these people encourage and support your swimming with the Parkside Panthers?

Desire to Excel:

- Improvement/mastery or trying to win, be better than others

Team Tradition:

- What sort of history does the Parkside Panthers swim team have?
- How does that make you feel?

Construct-derived sources of commitment:

Questions testing the Sport Commitment Model (SCM) constructs:

- How does your (SCM construct) relate to your commitment?
- Does it strengthen commitment, lessen commitment, have no effect, or is it already on the board? [No effect, drop from board]
- Is your (SCM construct) an important enough cause of your commitment to be included in your personal commitment picture? Yes or No. [If No, drop from board]

Intentions for next year:

- Do you intend to swim with the Parkside Panthers again next year?

Section V. Commitment to the Sport of Swimming

Definition of commitment to the sport of swimming:

So now we're going to go through this process again, but this time we'll be looking at your commitment to the sport of swimming. By commitment to the sport of swimming I mean "Your desire and determination to keep swimming on a regular basis," whether that's on your own, with friends, or with a club.

- Do you have any questions about what I mean by commitment to the sport of swimming?
- Does this definition make sense to you?
- Is there anything you would like to add to this definition?

Section VI. Swimmer-derived Sources of Commitment to the Sport of Swimming

Orienting instructions for swimmer-derived sources of commitment:

In discussing your sources of commitment to the sport of swimming, please keep two important things in mind: First, please feel free to draw on any aspect of your swimming experience in identifying the causes of your commitment. You do not need to limit yourself only to competitive swimming. Your sources of commitment could come from things or people both in and out of the pool. For example, your sources could come from swim meets and practices, swimming lessons and free time in the pool, relationships and interactions with people (such as your family, teammates, coaches, classmates or other friends), or from any other important part of your experience as a swimmer. So when you are thinking about what your sources of commitment are—think big. Draw on your total experience as a swimmer.

The second point to keep in mind as we discuss the sources of your commitment is that there are two general types of sources that can operate at any given time:

Those that strengthen your commitment, and those that lessen your commitment (chip away at it). So in discussing the causes of your commitment, please consider both kinds.

Swimmer-derived sources of commitment:

Thinking about your total swimming experience and things that can strengthen or lessen your commitment:

- What are the sources of your commitment to continue swimming?
- What creates or lessens your desire and determination to keep swimming?

[Probes]

- What other sources of commitment do you have?
- What (or who) else creates this commitment in you?
- Do you have any other sources of commitment? Remember, you can add sources at any time during the interview.

Effect of each swimmer-derived source on commitment:

Questions for each source:

- Does (Source) strengthen or lessen your desire and determination to keep swimming? Or does it do both?
- How does (Source) (strengthen and/or lessen) your commitment to the sport of swimming?

[Probe]

- Are there any other ways in which (Source) strengthens (and/or lessens) your commitment?

Section VII. Construct-derived Sources of Commitment to the Sport of Swimming

Instructions for construct-derived sources of commitment:

So what is developing here is your own, individual picture of commitment to the sport of swimming. Unprompted, you have identified these [point to board] as the causes of your commitment to keep swimming. To complete your picture, I will now present some additional items that some athletes in the past have identified as sources of their own commitment. Some athletes think all of these are causes of their commitment, some think none of these are sources, and some athletes think some items are and some items are not sources of their commitment. So again, there are no right or wrong answers here. I just want to get your evaluation of whether any of these items are sources of your commitment.

To do so, I will define each item, ask you some questions about it to see what it means to you, and then ask you to evaluate whether it is important enough to include in your own picture of commitment. It is possible that you might have

already mentioned some of these items. If so, just say so. I will be on the lookout for this, too. Again, please think about all aspects of your swimming experience as you discuss these items. Do you have any questions about what we will be doing?

Lead-up questions specific to each SCM construct:

Sport enjoyment:

- Considering everything, things both in and out of the pool, how much do you enjoy swimming? (1-7 Likert scale)

Valuable opportunities:

- What valuable opportunities do you have like these, any?

Other priorities in your life:

- Do you have other priorities in your life?
- What other priorities in your life do you have?
- What choices have you made about this priority (these priorities) and swimming?

Investing personal resources:

- What have you invested that you can't recover if you stop swimming?

Feeling obligated:

- Do you feel a sense of obligation to keep swimming because of the expectations of other people?
- Whose expectations are most important to you?
- What expectations do these people have?

Feeling encouraged and supported:

- Do you feel encouragement and support from other people for swimming?
- Whose encouragement and support are most important to you?
- How do these people encourage and support your swimming?

Desire to Excel:

- Improvement/mastery or trying to win, be better than others

**Team Tradition:*

- What sort of history does your team have?
- How does that make you feel?

Construct-derived sources of commitment:

Questions testing the Sport Commitment Model (SCM) constructs:

- How does your (SCM construct) relate to your commitment?

- Does it strengthen commitment, lessen commitment, have no effect, or is it already on the board? [No effect, drop from board]
- Is your (SCM construct) an important enough cause of your commitment to be included in your personal commitment picture? Yes or No. [If No, drop from board]

Intentions for next year:

- When the high school swim season is over, do you intend to continue swimming in some capacity, i.e. on your own, with friends, or with a club?
- When you graduate from high school, do you intend to continue swimming in some capacity, i.e. on your own, with friends, or with a club?

Section VIII. Interview Conclusion

So I just want to review your personal commitment pictures again. Thank you so much for working on this with me!

- Do you have any thoughts on this interview and the pictures we came up with?
- Do you agree that these are accurate pictures of your commitment to the Parkside Panthers swim team and to the sport of swimming?
- May I contact you again, for any clarification and confirmation that I've understood your meaning?

Thank you for your time! If you have any questions about this research, please feel free to contact me.

Appendix E

Information Letter and Consent Form

Faculty of Physical Education and Recreation

W1-34 Van Vleet Centre
Edmonton, Alberta, Canada T6G 2H9

INFORMATION LETTER TO PARENTS**Study Title: Commitment in High School Swimming****Research Investigator:**

Heather Larson
[Email address]
[Phone number]

Supervisor:

Dr. Ian Reade
[Email address]
[Phone number]

Background

My name is Heather Larson and I am a graduate student in the Faculty of Physical Education and Recreation at the University of Alberta. Before this, I spent two years teaching high school overseas. I have also coached competitive swimming for many years.

Purpose

The purpose of this study is to explore the reasons for committing to a high school swim team. We will also look at patterns of physical activity before, during, and after the high school swim season.

Study Procedures

If you allow your child to participate in this study, I will ask him or her to complete questionnaires at three different points in the school year. These questionnaires will take approximately 15-20 minutes to complete. I will also conduct interviews with any students who would like to talk about their commitment to swimming. These interviews will likely last between 45 and 60 minutes. Audio recordings of these interviews will be typed out and then I will follow up to make sure that I have accurately captured their meaning.

Benefits

Most Canadians are not getting enough physical activity. This may lead to serious health problems in the future. Hopefully, this research will explain how commitment to a high school sports team might lead to more future participation in sport and physical activity. While your child might not benefit directly from this study, this research may help people in the future.

Risk

There are no known risks linked to being in my research study. If we learn anything during the research that may affect your willingness to allow your child to continue being in my study, we will tell you right away. My research study will be conducted as approved by the University of Alberta's Research Ethics Board.

Voluntary Participation

Participation in my research study is free and voluntary. Your child is not obligated to participate. Even if you agree to allow your child to be in my study, your child may withdraw from it at any time, until data collection is complete. Once data collection is complete, it would not be possible to identify your child's data in order to remove it.

Confidentiality

Data will be kept confidential. The only people with access to the data will be Dr. Ian Reade and myself. Paper documents will be stored in a locked office and electronic files will be password protected and encrypted during the course of the study and after completion of the study for a five-year period. After the five-year period deemed appropriate by the Research Ethics Board, consent forms and any other data identifying study information (i.e., questionnaires) will be shredded through a confidential shredding service, and electronic data will be deleted.

The results from my study will be used for my Master of Arts thesis. When I complete my thesis, I may publish some academic articles and give some presentations on my research. However, your child's identity will not be shared at any time. If you or your child are interested in the results of my study, you can email me for information.

Further Information

If you have any questions about my study, please feel free to contact me or my supervisor, Dr. Ian Reade. Thank you for considering this request. If you have any concerns about this study, you may contact the Research Ethics Office, at 492-2615. This office has no direct involvement with my research study.

Title of Project: Commitment in High School Swimming

Principal Investigator: Heather Larson

Supervisor: Dr. Ian Reade

Do you understand that you have been asked if your child can be in a research study? Yes No

Have you read and received a copy of the attached Information Letter? Yes No

Do you understand the benefits and risks involved in taking part in this research study? Yes No

Have you had an opportunity to ask questions and discuss this study? Yes No

Do you understand that you are free to refuse to allow your child to participate, or to withdraw your child from the study at any time, without consequence? Yes No

Has the issue of confidentiality been explained to you? Do you understand who will have access to your information? Yes No

Do you understand that any interviews conducted will be recorded with an audio recording device? Yes No

I have read and understood the attached information letter and agree to allow my child to take part in this study:

_____ _____
Signature of Research Participant's Parent/Guardian Date

_____ _____
Printed Name of Research Participant's Parent/Guardian

_____ _____
Signature of Research Participant Date

_____ _____
Printed Name of Research Participant