

**DISTINGUISHING BETWEEN DUAL ROLES: A MIXED-METHODS
EXAMINATION OF THE PERCEPTIONS AND BEHAVIOURS OF
COACHES WORKING IN RECREATIONAL AND COMPETITIVE
SYNCHRONIZED SWIMMING ENVIRONMENTS**

by

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Abstract

The purpose of this study was to examine the perceptions and behaviours of coaches within recreational and competitive youth sport programs. Using a mixed-methods convergent parallel design (Creswell & Plano Clark, 2011) this thesis examined the experiences of coaches who were working or had worked with both recreational- and competitive-level synchronized swimmers. Eighteen female coaches participated in semi-structured interviews. In addition, a sub-sample of five coaches from this group were observed six times over the course of the sport season (three sessions in the recreational setting and three sessions in the competitive setting). Results from the coaches' qualitative interview responses revealed key distinctions between competitive and recreational environments which were placed into themes across three dimensions: (1) coaches' and athletes' level of experience: novice vs expert, (2) training structure: experimentation vs commitment, and (3) program structure: participation vs performance. Although systematic observations revealed differences on specific behaviours (e.g., levels of positive modeling, instruction, and questioning) related to these distinctions, coaching patterns as a whole were relatively consistent across the recreational and competitive environments. These findings suggest that coaches may use certain behaviours more often during certain practice activities but that the overall structure of recreational and competitive practice activities may not be as different as coaches perceive them to be. It may be that differences in coach behaviour are more nuanced than the literature would suggest, and that changes occur more so at the level of intonation rather than overt behaviour.

Co-Authorship

This thesis presents the original work of Renée Matte in collaboration with her advisor,
Dr. Jean Côté.

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Table of Contents

Abstract.....	ii
Co-Authorship	iii
Acknowledgements.....	iv
List of Tables	viii
List of Abbreviations	ix
Glossary of Synchronized Swimming Terms	x
Chapter 1 Introduction	1
Chapter 2 Literature Review	5
Youth Sport Environment Structure	5
Recreational sport.....	6
Competitive sport	7
Behavioural Antecedents	9
Coach Behaviour across Environments	12
Methodological Considerations	14
Purpose of Study.....	16
Chapter 3 Methods.....	17
Positionality Statement	17
Study Design.....	17
Qualitative Methods.....	18
Participants	18
Recruitment procedures	18
Measures.....	19
Procedure.....	19
Trustworthiness	20
Data analysis.....	20
Quantitative Methods.....	21
Participants	21
Recruitment procedures	22
Measures.....	22
Observation instrument.....	22
Global rating scale	23
Recording procedure	24

Observation instrument coding protocol.....	24
Global rating scale coding protocol.....	25
Data analysis.....	25
Chapter 4 Results	27
Qualitative Results.....	27
Coaches' and athletes' level of experience: novice vs expert.....	27
Context.....	28
Perceived behaviour.....	30
Training structure: exploration vs commitment.....	32
Context.....	32
Perceived behaviour.....	33
Program structure: participation vs performance.....	34
Context.....	34
Perceived behaviour.....	36
Quantitative Results.....	37
Chapter 5 Discussion	41
Coach and Athlete Progression.....	42
Competitive and Recreational Program Structure.....	46
Behaviour Patterns across Recreational and Competitive Settings.....	50
Chapter 6 Conclusions	53
Limitations and Future Directions	54
Recommendations.....	56
References.....	59
Appendix A Interview Guide.....	72
Appendix B Recreational and Competitive Coach Behaviour Coding Manual.....	75
Appendix C Global Rating Scales	84
Appendix D Letter of Information.....	87
Appendix E Consent Forms.....	90

List of Tables

Table 1.	Descriptive statistics and t-test results comparing global ratings of the practice environment.....	38
Table 2.	Descriptive statistics and t-test results comparing global ratings of coach appearance.....	39
Table 3.	Total frequency count of coach behaviour.....	40

List of Abbreviations

CAICS: Coach-Athlete Interaction System

CBAS: Coach Behaviour Assessment System.

DMSP: Developmental Model of Sport Participation

LTAD: Long-Term Athlete Development

NAIA: National Association of Intercollegiate Athletics

NCAA: National Collegiate Athletic Association

NCCP: National Coaching Certification Program

PSO: Provincial Sport Organization

RCCB: Recreational and Competitive Coach Behaviour coding system

Glossary of Synchronized Swimming Terms

Ballet leg: A back layout position with one leg lifted perpendicular to the surface.

Duet: An event in which two swimmers perform a routine together.

Eggbeater: A method of treading water in which the lower legs rotate in opposite directions and the feet are flexed to create water pressure.

Figure: A specific series of body positions, the majority of which involve holding the legs out of the water.

Figure competition: An event in which junior level and younger swimmers perform a chosen group of figures individually in front of panels of judges.

Mock meet: An imitation of a meet held during practice, used as a developmental tool.

Pattern: The formation that a team holds during any period of choreography. It changes many times during one routine.

Propeller: A type of sculling in which the swimmer's back is flat on the surface of the water and her hands are above her head. Palms are open and flat propelling the swimmer in a foot-first direction.

Routine: Strokes, figures, and all choreography performed by swimmers to music.

Run-through: Execution of the routine during practice, typically performed to music.

Sculling: Hand movements that propel, stabilize, and balance a swimmer's body.

Support scull: The type of sculling used most often when the swimmer is inverted for maximum sustained height. Elbows are near the waist, and the forearms are out to the side

Tub position: The swimmer is extended parallel to the surface and her knees are bent at the surface to form a 90 degree angle.

Chapter 1

Introduction

Over half of Canadian youth between the ages of 10 and 15 are enrolled in at least one organized sport (Statistics Canada, 2008). There is an extensive body of literature that links sport participation with positive outcomes such as the development of leadership skills, enhanced academic achievement, and increased prosocial behaviour (Eccles, Barber, Stone, & Hunt, 2003; Elley & Kirk, 2002; Rutten et al., 2007). However, evidence suggests that involvement in sport can also be associated with increased aggression, and decreased moral reasoning (Eccles & Barber, 1999; Gardner & Janelle, 2002; Lemyre, Roberts, & Ommundsen, 2002). The existence of conflicting results illustrates that positive and negative sport experiences are influenced by a number of personal, social, and contextual factors. Consequently, there is a need to further understand the sport environment and how its members can contribute to youth's development.

Over the years, researchers have used various labels to classify the environments within the youth sport context in terms of their level of competition. According to Lyle (1999) and Côté, Young, North, and Duffy (2007) youth sport can be either participation-based or performance-based. Likewise, Chelladurai (2007) viewed the sport environment as being either enjoyment-focused or excellence-focused. Even still, other researchers have referred to youth sport as being either recreational or competitive (Duda, 1989; Fortier, Vallerand, Brière, & Provencher, 1995). Moreover, some researchers have instead proposed that sport environments be classified trichotomously. For instance, Gilbert and Trudel (2006) divided sport into recreational, developmental, and elite

categories, whereas Ford, Yates, and Williams (2010) identified the sport groups in their study as elite, sub-elite, and non-elite. Furthermore, the Coaching Association of Canada and the National Coaching Certification Program (NCCP; 2008) have separated youth sport into three settings: community, instructional, and competitive.

Whereas the aforementioned sports settings are primarily defined by level of competition, sport environments are also defined according to stages of development or chronological age. For example, Bloom (1985) determined that learners went through three stages of development – the early, middle, and later years – which are representative of a shift in coaching orientation and performer goals rather than chronological time. Similarly, Côté, Baker, and Abernethy (2007) conceptualized three stages of development, that is the sampling, specializing, and investment years, but further delineated the stages based on age restrictions. Although the labeling of sport environments varies throughout the literature, the different classifications generally encapsulate the same notion: that sport environments are traditionally geared towards either (a) play, fun, and the development of basic motor skills, or (b) promoting sport-specific skill development, performance, and competition.

As the previous descriptions indicate, the objectives of recreational and competitive youth sport environments are fundamentally different. Nevertheless, a central figure in both settings is the coach. Specifically, coaches are responsible for translating the goals of recreational and competitive sport into developmentally appropriate programs (Fraser-Thomas, Côté, & Deakin, 2005). Although coaches across most levels of sport receive some training in regards to planning and structuring practices (e.g., formal training plans; Coaching Association of Canada, 2008) they often choose to

design and implement a sport program based on their own knowledge and perceptions of the environment (Lyle, 2002). Through past experiences in these environments as either athletes and/or coaches and formal training such as NCCP certification programs, coaches develop philosophies, goals, and expectations (the combination of which is also referred to as behavioural antecedents; Horn, 2008) for themselves that apply to a particular sport setting (Erickson, Bruner, MacDonald, & Côté, 2008). For instance, a coach might value winning in the competitive environment, whereas that same coach in a recreational setting might emphasize athlete participation above all else. Accordingly, coaches' interpretation of the environment impacts the focus, direction, and structure of the youth sport program they implement, as well as the behaviour they display.

Currently, our understanding of the program structure and objectives, as well as the behaviours of recreational and competitive sport coaches have primarily been gathered using the perceptions and behaviours of coaches working exclusively in one setting or the other (Gilbert & Trudel, 2004a). Based on this information, researchers suggest that recreational and competitive sport are fundamentally different and that these differences will trickle down from structure, to behavioural antecedents, to coach behaviour (Horn, 2008). However, direct comparison between recreational and competitive coaches' behaviour has, to date, been subject to confounds such as personality differences, age of the athletes, and varying levels of coaching experience (Horn, 2008; Sullivan, Paquette, Holt, & Bloom, 2012). Research cannot yet conclude whether the expected distinctions between recreational and competitive coaches occur because of differences between the coaches themselves, or if they are the result of coaches tailoring their programs to suit the respective environments. Thus, even though

we anticipate that a coach working in both recreational and competitive youth sport environments will perceive the behavioural antecedents differently, there is no telling if this will result in a coach displaying different behaviour patterns in each of these environments.

Therefore, the current study examined the perspectives and behaviours of coaches working concurrently in recreational and competitive youth sport programs. More specifically, the current research explored coaches' perceptions of the differences and similarities of recreational and competitive youth sport programs and, investigated whether coaches modify their behaviour when coaching in a recreational versus competitive environment. The examination of the same coach's perceptions and behaviours in both recreational and competitive sport will provide new insight into the ways coaches adapt to different environments. In addition, the information gleaned from this study could inform coach education programs and provide further practical recommendations for future generations of coaches. It is anticipated that this information will allow researchers and practitioners to gain a better understanding of the characteristics and coaches' behaviours across recreational and competitive sport environments.

Chapter 2

Literature Review

Youth Sport Environment Structure

The term ‘coach’ is a broad label used to describe an individual who nurtures someone’s development and performance and can be applied in many different environments. For instance, in sport, coaching is seen as the guided improvement of an athlete or team at identifiable stages of a sportsperson’s pathway (European Coaching Council, 2007). This definition of sports coaching suggests that there are several coaching domains – or distinctive sporting environments with differing environmental demands – that require different types of coaching. Correspondingly, coaches are expected to adapt their philosophies, goals, expectations, and behaviours to suit the environment and, ultimately, be an effective coach (Farrow, Baker, & MacMahon, 2008). However, sport structure is likely to differ based on a number of factors including: complexity of performance, intensity of participation and preparation, duration of program, the presence or absence of competition, and the standard of performance (Stafford, 2011). These differences result in sport programs featuring distinctive requirements (e.g., a high number of training hours or commitment to only one sport) and foci (e.g., winning versus having fun; Lyle, 2002). Given the differences between the recreational and competitive sport environment, researchers have created detailed portraits of the important characteristics for coaching across each setting.

Recreational sport. The body of literature on coaching suggests that recreational sport is typically the level at which individuals begin sport training (Bloom, 1985; Côté, Baker, & Abernethy, 2003; Lyle, 2002; Schinke, Bloom, & Salmela, 1995).

Accordingly, the recreational environment is meant to introduce participants to the development of basic motor skills and to allow a certain degree of exploration related to movement and body awareness (Coaching Association of Canada, 2008). These discoveries are often made through the use of fun, play-based activities that are constantly changing to keep participants interested and focused (Côté, Baker, et al., 2007). Due to the enjoyment-focused and introductory nature of recreational sport, there is flexibility in the structure and programming of practices and athletes are encouraged to sample a wide variety of sports concurrently (Côté & Gilbert, 2009; Griffin & Butler, 2005). Fittingly, youth recreational sport programs are encouraged to keep time commitments to a minimum - with practices often occurring no more than twice a week and for less than two hours at a time (Coaching Association of Canada, 2008).

Moreover, recreational sport typically involves short practices of limited intensity, and a shorter sport season spanning only a few months (Kirk, MacDonald, & Sullivan, 2006). Given these characteristics, recreational sport is also more lenient than competitive sport in terms of commitment and punctuality. Typical recreational programs do not use competition as a motivational incentive, as athletes are generally intrinsically motivated by factors such as fun and fitness (Fortier et al., 1995). However, recreational programs may often provide games and chances for skill demonstration such as mock meets, scrimmages at the end of practice, or year-end shows (Shields & Bredemeier, 2009). These opportunities however, often modify sport structures to

minimize the focus on competitive outcomes. By using tactics like not keeping score or handing out ribbons to every participant (Shields & Bredemeier, 2009), the participatory nature of recreational sport is reinforced.

In addition to participation, recreational programs often focus on prolonged sport-engagement (Lyle, 2002). In other words, as an individual's first foray into structured physical activity, recreational programs aim to develop the participant's interest in sport so that he or she will continue to take part over a long period of time (Kirk et al., 2006; Lyle, 2002). Thus, recreational programs will emphasize the intrinsic benefits of participation to ignite a long-term desire for sport involvement – promoting fun, friendship, and skill improvement (Fortier et al., 1995). These values are promoted through short-term, personal performance-based goals that give almost instant gratification (Côté, Baker, et al., 2007). In addition, basic motor skills are taught in the form of quick and easy game-based activities (Stafford, 2011). The short duration of these activities also allows the participants to socialize with their teammates and permits them to rotate through a wide variety of positions and skills.

Competitive sport. In theory, there is a clear demarcation between purely recreational pursuits and competitive sports; the main distinction being the emphasis competitive sport environments place on performance outcomes (Côté, Young, et al., 2007). However, the distinction between competitive and recreational sport “in practice” may not be as clear as the literature would suggest, as we do not yet know to what extent these assumptions are actually present. Often, the differentiation between these two environments comes down to a matter of degree (Lyle, 2002). For instance, competitive sport distinguishes itself from recreational sport by requiring a *higher* level of

commitment, *more intensive* preparation, *longer* practice and season duration, and a *more extensive* training regimen (Sirotic, Coutts, Knowles, & Catterick, 2009). With the actual degree of more or less being subjectively decided from club to club, province to province, and nation to nation (Kirk et al., 2006). So, how do we draw a line between what is competitive and what is recreational sport?

Competitive sport generally requires athletes to specialize, whereby competitive athletes are asked to fully commit to one sport on a year-round basis (Lyle, 2002). This specialization allows athletes to devote the necessary 10-20 hours a week to developing sport-specific skills that allow them to compete at a higher level (Côté, Young, et al., 2007). For athletes to develop these difficult skills, competitive practices typically consist of long segments of drills and activities designed to improve performance and skill acquisition through highly organized practice (Côté, Baker, et al., 2007). Practices at this level also tend to be more structured and carefully planned, since there are mandatory skills and techniques that need to be mastered in order for the athlete to progress to more elite levels (Stafford, 2011).

As a result, competitive sport is often framed in a way for athletes to achieve extrinsic benefits, such as winning and being selected for high-performance teams (Côté, Young, et al., 2007). As indicated by Lyle (1999), competitive-level athletes are motivated by performance, competition, and receiving recognition from outside sources (e.g., judges, parents, or other athletes) in the form of praise, applause, and medals or trophies. In order to fulfill this competitiveness, training is structured purposefully, targeting athletes' strength and weaknesses so as to optimize skill development and level of improvement (Ericsson, 2001). Thus, competitive youth sport environments tend to be

rigid with practices containing longer segments of drills and activities consisting of deliberate practice (Côté, Baker, et al., 2007). In addition, proper work-to-rest ratios must be implemented in competitive sport allowing the athletes time for deliberate recovery strategies (Goldsmith, 2011; Young & Salmela, 2002).

Furthermore, due to increased time commitment and focus required, as well as the smaller group sizes, and more mature athletes typical of a competitive sport environment (Côté, Young, et al., 2007), the coach-athlete relationship may differ. Notably, the coach-athlete relationship becomes more collaborative in nature, allowing for frequent interchanges of ideas between the coach and the athlete (Kalinowski, 1985; Côté & Sedgwick, 2003). In addition, the structure of competitive sport lends itself to setting both long- and short-term goals that focus on performance and outcomes. This approach to goal-setting allows coaches and athletes to discuss the athlete's progress in many facets of the sport, and form a deeper bond (Lyle, 2002).

Finally, due to the grueling training schedule and shift towards more deliberate practice associated with competitive sport environments, coaches often organize many social activities (e.g., barbeques, bowling nights, trips to the zoo) with their competitive athletes outside of the practice environment to promote team bonding (Fraser-Thomas et al., 2005). These extracurricular activities influence the coach-athlete dynamic and demonstrate that the structure of sport programs permeates the behavioural antecedents of the sport environment as well as many aspects of the athletes' lives.

Behavioural Antecedents

The body of literature about coaching contains various models pertaining to the sport environment's influence on coaching behaviour and its subsequent impact on the

athletes. One such model is Horn's model of coaching effectiveness (Horn, 2008). Within this model lies the concept that coaches' personal characteristics (i.e., age, gender, and years of experience) and contextual factors (i.e., type of sport, and level of competition) will influence coach behaviour. More specifically, Horn suggests that a coach's personal characteristics interact with contextual factors to influence his or her philosophies, goals, and expectations – which are referred-to as behavioural antecedents, and ultimately determine coaching behaviours. As architects of the sporting environment, coaches are responsible not only for creating age- and level-appropriate sport programming, but must also ensure that their behavioural antecedents and behaviours are congruent with the respective demands and foci of competitive and recreational sport (Lyle, 2002). This compatibility between the coach's behavioural antecedents and coach behaviour is what sport scientists believe will result in positive experiences for the athletes (Fraser-Thomas et al., 2005; Horn, 2008).

Most youth sport coaches have a great deal of flexibility in terms of the content they select to teach and the way they structure the training programs (Gilbert & Trudel, 2001). Accordingly, the decisions coaches make are directed by their coaching philosophy, which is defined as a set of principles that guides processes and practices and justifies why coaches act the way they do. Because of this position of authority in the sport environment, the philosophies of coaches and their ability to implement these philosophies are crucial in influencing the type of learning that takes place. For instance, if a recreational-level coach values winning at all cost, the experience for his or her athletes would be much different than that of athletes coached by someone who prioritizes building friendships and having fun. Given the contrast between recreational

and competitive sport settings, it is assumed that a recreational coach's philosophy should be built on foundations of fun, teamwork, and equal treatment of all athletes, whereas a competitive sport environment would rest on philosophies such as optimal skill development and winning (Gilbert, Trudel, & Haughian, 1999).

Indeed, there is initial evidence that competitive sport coaches integrate such values in their coaching behaviours. A preliminary study by Wilcox and Trudel (1998) found that winning and player development were the two central principles of a competitive coach's belief system. In addition, the single participating coach in the study embraced values such as sportsmanship, respect and support for teammates, sport skill development, equal treatment of all participants, and fun. However, many inconsistencies were found when the coach was asked to explain how he implemented these values through his coaching behaviours – revealing the potential for misalignment between stated philosophies and the behaviours exhibited by the coach (Vealey, 2005). To some extent, this mismatch may be a result of the limited awareness of how coaches may perceive their own behaviours. For instance, while some coaches state that their philosophy emphasizes development and experience, their behaviour often emphasises winning (Vealey, 2005).

When considering this mismatch, we can also look towards the origin of coaching philosophies. Numerous factors influence the formation of a coach's philosophy: (a) coaches of youth sport model their approach to coaching on elite or professional sport where winning is emphasized (Gilbert et al., 1999; McCallister, Blinde, & Weiss, 2000), (b) coaches begin their coaching career as the assistant of a more experienced coach (Schinke et al., 1995), (c) coaches transition from being top-level athletes into coaching,

and as such base their practice on their past experiences (Erickson, Côté, & Fraser-Thomas, 2007), and (d) most sport organizations require coaches to have some level of formal training, therefore coaches begin their formation by taking introductory-level coaching courses. Taking all these factors into account, coaches must reconcile the information they are receiving with their own personal beliefs and characteristics to form their philosophy. This process may serve to explain why the differentiation between competitive coaching philosophies and practices might not be as clearly demarcated as previous research suggests.

Coach Behaviour across Environments

It is believed that in order to be effective, coaches must be aware of the overall sport environment in which they work (Gilbert & Trudel, 2004b; Lyle, 2002). As indicated by the contrasting descriptions of recreational and competitive coaching and the assumed behavioural antecedents associated with each, these two environments are quite different. In theory, the distinctive training, competition, and organizational characteristics of recreational and competitive sport environments should ensure coaches tailor their behaviour to mirror the demands of the training environment (Cross, 1995; Cushion & Jones, 2001; Lyle, 2002).

Coach behaviours in the practice setting have been the target of many research studies and, as might be expected, coaches can exhibit a wide range of behaviours in their interactions with athletes (Nash & Collins, 2006). For example, coaches might provide instruction and organization just as they might correct, question, inform, praise, or punish their athletes (Smith & Smoll, 2007). However, despite the large array of possible coach behaviours, the behaviour patterns exhibited by coaches have been relatively similar

across different sports and environments (Erickson & Gilbert, 2013). Ultimately, the vast majority of coaching studies across settings reveal that actions involving instruction, silence, praise, and scold account for over 80% of coach behaviours (Cushion, 2010).

While the coaching literature continues to grow, there are only a handful of studies that have compared coach behaviour across different competitive levels. In one of the first studies to examine coaching behaviours in different settings, Chaumeton and Duda (1988) examined the roles of athletes' age, competitive level (elementary school, junior high school, or high school), and setting (practices or games) on coaching behaviours in boys basketball. They found that all three factors influenced the coach-athlete interaction. More specifically, coaches at higher levels of competition engaged in relatively more outcome-oriented behaviours, and exhibited more of an outcome orientation during games than they did during practices. In addition, the high school coaches also placed a greater emphasis on winning than did the coaches of the elementary and junior high school teams.

A few years later, Gray and Curtis (1991) examined the self-reported risk management behaviours of soccer coaches (i.e., adequate supervision of athletes or use of acceptable coaching methods) at the NCAA Division I, National Association of Intercollegiate Athletics (NAIA; similar to NCAA Division II), and high school levels. The researchers found that there were no significant differences between the risk management behaviours in any of the three levels. In addition, an extension of this research performed by Gray and McKinstrey (1994) as well as Wolohan and Gray (1998) supported the previous findings.

The limited influence of age and skill level on coaching behaviour was also replicated in an observational study of 25 youth soccer coaches (9 elite-level, 9 sub-elite, and 7 non-elite) over 70 sessions (Ford et al., 2010). Results revealed that coaches from different competitive levels did not show different behaviour patterns. More recently, a study by LaForge, Sullivan, and Bloom (2012) compared the behaviours of 63 youth sport coaches from community, instructional, and competitive coaching environments. Each coach self-reported the environment in which they worked, and were asked exclusively about their behaviour in that specific environment. The findings revealed that perceived coaching behaviours did not differ among youth sport coaches regardless of the situational context or certification.

Finally, in a study of community and competitive coaches' self-perceived leadership behaviours and self-efficacy, Sullivan and colleagues (2012) found that the competitive level of the athlete did not impact the coaches' perceived coaching efficacy. Furthermore, the researchers concluded that instruction, positive feedback, praise and encouragement were all effective coaching behaviours when working with athletes between the ages of 12 and 16, independent of competitive level.

Methodological Considerations

As one of the most prominent lines of research in sport psychology, systematic observation is widely used to investigate the actual behaviours used by coaches (Cushion, 2010). Stemming from Tharp and Gallimore's (1976) observation of renowned basketball coach John Wooden, observational methods have proliferated as a way to analyze coaching behaviours. Borrowing from results in the fields of both education and

kinesiology, systematic observation has allowed for the creation of a coach behaviour database, which continues to inform sport science research.

While systematic observation may provide detailed information regarding coach behaviour, this approach does not garner insight into the reasoning behind behaviour (Potrac, Brewer, Jones, Armour, & Hoff, 2000). In this respect, Patton (2002) suggested that interviews allow for the gathering of other people's perspective, and provide the opportunity to gain deeper insight into underlying motives. Moreover, interviews yield detailed information regarding such factors as coaches' philosophies, beliefs, and experiences (Côté, Salmela, Trudel, Baria, & Russell, 1995; Jones, Armour, & Potrac, 2003). Lastly, interviews are frequently used in the coaching literature to contextualize participant responses (Creswell & Garrett, 2008). The systematic observation of a coach does not yet account for the accurate and measured level of enthusiasm, attitude, commitment, and outlook on coaching as would be represented in an interview. Furthermore, interviews enable a deeper understanding of the complex social, structural, and contextual factors which impact upon the experience of the coach, and therefore their behaviour in a given setting (Strean, 1998).

The combination of qualitative and quantitative methods helps create a more rigorous understanding of investigated phenomena (Tashakkori & Teddlie, 2009). This argument is echoed within the coaching literature, with new studies demonstrating how mixed methods are useful for examining the coaching process, and more specifically coaches' decision-making process (e.g., Smith & Cushion, 2006; Potrac, Jones, & Armour, 2002; Vergeer & Lyle, 2007). For that reason, supporting interview data with

documentation of actual behaviour provides a more complete and accurate interpretation of coaching across multiple youth sport environments.

Purpose of the study

Therefore, the purpose of this study was to examine coach behaviour as a function of the youth sport environment. The study began by gaining a deeper understanding of the recreational and competitive sport environment through the perceptions of coaches who worked, or had recently worked, in both environments. Coaches described their philosophies, goals, and expectations for each of the environments, followed by an explanation of how these behavioural antecedents influence their behaviour in recreational and competitive sport environments. Additionally, a sub-sample of these coaches was observed while coaching at both the recreational-level and the competitive-level to allow a comparison of the coaches' self-perceived behaviour and their actual behaviour. More specifically, this study attempted to answer the following research questions:

- 1) What are coaches' perceptions of the structure of the recreational and competitive sport environment?
- 2) Do coaches perceive that their behaviour differs between recreational and competitive sport environments?
- 3) How do the actual sport environment and actual coach behaviours compare to the coaches' perceptions?

Chapter 3

Methods

Positionality Statement

I, the primary author, have a vested interest in the sport of synchronized swimming. Over the last 17 years I have been involved as both a coach and a swimmer. I am an insider within the sport and its particular context. In addition, the coaches who participated in this study were aware that I had a background in synchronized swimming. Of particular relevance, some of the coaches knew me personally as either an athlete, a coach, or both. Moreover, certain coaches used examples involving athletes I knew as well as teams, clubs, and events which I was a part of. Due to the tight-knit structure of the synchronized swimming community, rapport was built almost immediately between myself and the individuals who took part in my study, as there is a certain understanding that comes from having similar backgrounds.

Study Design

The current study was carried out using a mixed methods design. More specifically, a convergent parallel approach consisting of semi-structured qualitative interviews, quantitative observation, and quantitative global ratings was utilized. According to Creswell and Plano Clark (2011), such study designs are selected based on four key factors: (a) the level of interaction between the qualitative and quantitative data strands (i.e., independent or interactive), (b) the relative priority of each type of data (i.e., equal priority, quantitative priority, or qualitative priority), (c) the timing of the data collection and analysis (i.e., concurrent, sequential, or multiphase combination timing),

and (d) the procedures used for mixing both strands (i.e., mixing during data collection, mixing during analysis, or mixing at the level of study design).

In a convergent parallel design, qualitative data and quantitative data are collected and analysed separately during the same research phase. The results are then merged to produce an overall interpretation (Creswell & Plano Clark, 2011). For the purposes of this study, the qualitative interviews were used as the primary data source, and the quantitative data was the secondary data source. This design allowed for the strengths of qualitative research, such as small samples and in-depth interpretations to be combined with those of quantitative research, exact measures and generalization (Patton, 2002). Furthermore, the mixed methods design enabled the triangulation of findings (Camerino, Castañer, & Anguera, 2012). Lastly, the supplementation of the qualitative data with quantitative data allowed for elaboration, complementarity, and corroboration (Brannen, 2007), which enhanced the richness of the findings and served as a measure of reliability (Creswell & Plano Clark, 2011).

Qualitative Methods

Participants. Eighteen female synchronized swimming coaches from clubs across Canada were interviewed. Coaching experience ranged from 3 to 42 years ($SD=9.41$). All coaches worked with both a recreational and a competitive team within the last five years as determined by the Synchro Canada guidelines (Canadian Amateur Synchronized Swimming Association, 2013).

Recruitment procedures. The provincial sport organizations (PSO) from each Canadian province (excluding Quebec) were contacted via electronic correspondence about participation in the study. In the recruitment email, the PSO contact was instructed

to forward the study information to all synchronized swimming clubs in their province. Subsequently, coaches from each individual club responded to the researcher if (a) they met the criteria of the study – having coached a recreational and competitive team within the last five years – and (b) if they were interested in participating in the study. All 18 coaches were recruited within two weeks of the initial email being sent out.

Measures. The interview guide used in this study was formulated based on Horn's model of coaching effectiveness (2008). More specifically, the questions focused on the behavioural antecedents explained in the model and how these factors affected self-perceived coaching behaviours. The interview guide was composed of 16 primary questions (see Appendix A) designed to have coaches explore their past experiences in coaching at both the recreational and competitive level. The open-ended questions allowed for the investigation of what coaches did along with how and why they did it. Four different question typologies were used (Patton, 2002), including: (1) experience and behaviour questions, (2) opinion and values questions, (3) feeling questions, (4) and knowledge questions.

Procedure. Synchronized swimming coaches from across Canada were contacted by electronic correspondence to participate in an interview regarding their experiences coaching in both the recreational and competitive environment. The coaches were advised that participation in the study was completely voluntary and that all of the information obtained would remain confidential. In addition, coaches provided written and audio-recorded consent prior to participation. The interviews were conducted over the phone ($n=10$), or via Skype ($n=8$), as determined by the coach's preference and lasted between 35 and 65 minutes.

Trustworthiness. Two strategies were undertaken to enhance the trustworthiness of the qualitative data. First, an on-the-spot member checking was employed. This process consisted of clarifying or confirming interpretations that the interviewer had during the interview by stating them back to the participant. In addition, member checks also took place once the interviews were transcribed. During this second member check, individuals were asked to highlight any information that they wanted added, dropped, or changed. This process resulted in three coaches asking for events which they deemed ‘identifiable’ to be removed from the transcripts. Moreover, an additional two coaches provided corrections on their respective transcripts pertaining to grammatical errors in the transcribed interview dialogue. No corrections were made to any meaningful content in the returned transcript. Participants were given a two week deadline to return their reviewed transcript. After the final coach had been interviewed and the 14 days has passed, the coding process began.

Data Analysis. Each interview was audio taped and transcribed verbatim. To maintain confidentiality, each coach was randomly assigned an alphanumeric code (C1 – C18). Analysis began with line-by-line coding (Charmaz, 2006). Peer review was used twice during data analysis. Three separate student researchers, each with varying knowledge of the study, coded three interviews and identified initial meaning units and rough categories (Charmaz, 2006). Revisions to the initial coding list were made, generating a framework that reflected agreement between the author and the two student assistants. Subsequently, each researcher was given a copy of the revised coding framework and assigned two more interviews to code. A second revision of the framework took place, with the peer reviewers adding supplemental details to the

previous list to create a refined coding list that encapsulated codes from seven different interviews.

Using this third draft of the revised coding framework, the primary researcher completed the line-by-line coding of the remaining 11 interviews. The primary researcher then created a final version of the coding framework, which combined similar codes and discarded irrelevant codes. The data were then separated, sorted, and refined to help identify codes that resonated with many participants (Krippendorff, 2013). Lastly, theoretical coding was used to help theorize how the focused codes related to one another.

Quantitative Methods

Participants. Five coaches and their athletes ($n= 26$ competitive, $n= 40$ recreational) took part in the systematic observation portion of the study. Athletes were females between the ages of 5 and 16. The swimmers ranged from having no previous experience in the sport to having a maximum of five years' experience. There was no more than a three year difference between the ages of the recreational and competitive athletes of each coach. At the time of data collection each athlete was registered with Synchro Swim Ontario (Synchro Swim Ontario Provincial Rulebook, 2013) as either a recreational swimmer or a competitive swimmer. Coaches had between 3 and 19 years' experience coaching ($SD = 6.83$) and each was the head coach of the team being observed. In addition, coach certification ranged from competition introduction (level 1) to competition development (level 3). On average, coaches spent 90 minutes per week coaching at the recreational level and five hours per week coaching at the competitive level.

Recruitment procedures. Synchronized swimming clubs in the Central region of Ontario were contacted via electronic correspondence regarding participation in the study. Club contacts were informed to respond if the club had any coaches currently working with both recreational and competitive teams. Once initial contact was made between the researcher and the specific coach working concurrently in the recreational and competitive environment, further screening questions were answered to examine whether the coach was eligible for the study. More specifically, individuals had to be the head coach of the recreational and competitive teams they were working with. Additionally, the recreational and competitive athletes had to be relatively the same age (i.e., no more than three years difference between both groups). Finally, coaches had to be training recreational athletes for a minimum of one hour per week and recreational athletes for a minimum of three hours per week. If coaches met the eligibility criteria they received further information regarding the study and an informed consent. Videotaping sessions were scheduled once coaches returned a signed copy of the informed consent form.

Measures.

Observation instrument. The observation instrument used in the present study was developed based on the Coach-Athlete Interaction Coding System (CAICS; Erickson, Côté, Hollenstein, & Deakin, 2011). The CAICS is contextually valid for the present study as it was created to examine competitive synchronized swimming coaches' behaviours during practice time. The CAICS contains 12 behavioural categories to classify coach behaviour content, including: 1) positive reinforcement, 2) corrective encouragement, 3) future encouragement, 4) corrective technical, 5) future technical, 6)

organization, 7) observation, 8) general communication, 9) not engaged, 10) keeping control, 11) error technical, and 12) negative evaluation.

Two concerns necessitated the modification of the original CAICS for use in the current study. First, the CAICS was developed for the high performance female youth synchronized swimming context. As such, the categories were not necessarily representative of the coaching behaviours occurring in a lower competitive and recreational practice environment. For instance, the system did not include content codes for modeling or physical guidance, which are relevant in a recreational setting (Agnew, 1978; Kasson, 1974; Piéron & Goncalves, 1987; Rupert & Buschner, 1989). Other modifications included: (a) collapsing the categories of corrective encouragement and future encouragement into one category, (b) renaming corrective technical as corrective technical feedback and future technical as technical instruction, (c) adding two behaviour categories (i.e., informing and questioning), (d) removing all content codes pertaining to athlete behaviour, and (e) creating a list of three active coach content codes: positive modeling, negative modeling, and physical guidance. Modification of the CAICS resulted in a total of 16 behavioural categories. The reworked instrument was named the Recreational and Competitive Coach Behaviour coding system (RCCB) and is included in its entirety in Appendix B.

Global rating scale. A global rating scale provides the general evaluation of a concept or construct using a standardized format, such as a seven-point scale (Kazdin, 1980). For the purposes of this study, global rating scales worked as an alternative method of analysing the videos and looking at coach behaviour; the scales were used to obtain an independent rating of the overall practice. The global rating scale developed

for this study was informed by both the existing literature and the interview data. The scale was divided into 30 items forming two sections: (1) coach appearance and (2) overall impression of the practice environment. The first 17 items were adapted from a combination of the Teacher Behaviors Checklist (Buskist, Sikorski, Buckley, & Saville, 2002), and the coach's answers to question 11 from the interview guide (i.e., their expectations). The remaining 13 items were derived from idealized descriptions of the recreational and competitive sport environment proposed by Lyle (2002) and Côté and colleagues (2007). Both the positive and negative counterparts were included to ensure that questions were carefully answered (Popper, 2004). Each item was rated by five coders on a 7-point scale, ranging from 1 (*not at all true*) to 7 (*extremely true*). For a complete outline of the global ratings scale, see Appendix C.

Recording procedure. The coaches, athletes, and athletes' parents provided written consent prior to participation. Five coaches were observed a total of six times each - three times in the recreational setting and three times in the competitive setting - while wearing an omni-directional wireless microphone. Practices were between one and three hours in duration and were taped in their entirety. The video camera was placed on the pool deck in close proximity to the coach. Camera angles were modified to focus almost exclusively on the coach and to track her movement. One pilot session in each of the settings was used to acquaint the coaches and athletes to the presence of the researcher and the recording process to help minimize reactivity (Smith, Smoll, & Hunt, 1977).

Observation instrument coding protocol. Video analysis was two-fold, using systematic observation and global rating scales. Systematic observation consisted of

coding entire practices, while these same 20 practices were each condensed into 12-minute segments for the global ratings.

For the purposes of establishing inter-coder reliability during the systematic observation coding, the primary researcher and a student assistant underwent coder training and reliability testing. The two researchers were trained to meet a minimum agreement of 75% on frequency for two five-minute video segments before coding full videos (Erickson et al., 2011; Hollenstein, Granic, Stoolmiller, & Snyder, 2004). Frequency agreement referred to the total number of occurrences that both coders activated the same specific behavioural category and modifiers within a three second window. Percentage agreement for frequency of behaviours was calculated, with both meeting adequate reliability (freq. % agreement = 90%; $\kappa = .89$ and 84%; $\kappa = .83$, respectively).

Global rating scale coding protocol. In this study, global ratings were performed by five student coders, with varying degrees of knowledge about the purposes of the study and the sport of synchronized swimming. The coders were instructed to: (a) match the number assigned to video to the one written on the global rating scale; (b) wear headphones while watching the videos; (c) watch the entire segment before making judgments; (d) consider each video independently; (e) complete a maximum of two ratings in one session; (f) keep all ratings confidential.

Data analysis. All videos were coded in their entirety, resulting in a total of 31 hours of observation time spread over 20 videos and shared between two coders (the primary investigator and one student assistant). Given the discrepancy between the length of recreational and competitive practices, subsequent calculations were applied to

ensure that the behaviour frequencies accounted for the same length of time. Behaviour observation was analysed quantitatively using frequency counts for each of the 16 behaviours and resulted in over 22,000 individual coded behaviours. The frequency counts for each of these behaviours was averaged to give a representative frequency count of each behaviour in both the recreational and competitive setting. A Chi Square was performed to examine whether differences existed between the observed behaviour frequencies within recreational and competitive environments, with the null hypothesis that the frequencies would not differ.

Analysis of the global rating scales was done using a dependent samples t-test. This analysis was performed using each coder's individual rating of the 30 items for each of the 20 video segments. The dependent samples t-test allowed for the comparison of the coach's appearance and the overall practice environment in both the recreational and competitive setting.

Chapter 4

Results

Given that the design of this mixed-methods study, coaches' responses in qualitative interviews will be explored first, followed by results pertaining to coach observations. The analysis of the semi-structured interviews resulted in over 500 meaning units that were ultimately grouped into three themes, wherein coaches contrasted their recreational and competitive coaching experiences. First, participants contrasted the level of experience demonstrated by coaches and athletes, encapsulating the level of proficiency (novice versus expert) of both the coach and the athlete in the sport of synchronized swimming. Second, coaches differentiated training structure in terms of the level of investment athletes and coaches made to the sport (e.g., and 'exploration' vs 'commitment'), and its influence on the coaches' practice planning and behaviour. Lastly, coaches compared the participation versus performance focuses of programs, dealing with the underlying goals of the respective programs and how these affect the structure of the recreational and competitive environment and respective coaching behaviours. Coaches ultimately felt that although their philosophies remained relatively consistent across both environments, recreational and competitive settings were unique in terms of coach/athlete proficiency, commitment, and ultimate goals of program involvement.

Qualitative Results

Coaches' and athletes' level of experience: novice versus expert.

Context. Coaches considered recreational synchronized swimming to be an introductory level for both coaches and athletes. They clarified that typically, athletes will begin synchronized swimming at the recreational level and transition into competitive after ‘getting their feet wet’: “Recreational is sort of an introduction to competitive, not for everyone, but a lot of competitive athletes get their start in recreational swimming.” (C2) In addition, the recreational level is seen as the first step to coaching. Coaches explained that, for most clubs, athletes who are transitioning into coaching begin by assisting more experienced coaches with recreational teams to gain experience. Subsequently, coaches expected to be assigned their own recreational team and ultimately (a couple of years later) a competitive-level routine:

I was an assistant coach and had a lot of fun. Then I applied to be a coach the next year and they gave me a [recreational] team. This is my 3rd year coaching a rec team, and my first year coaching a competitive routine [a duet]. (C4)

It was explained that this was the typical progression for a synchronized swimming coach. Coaches that were further along in this pathway identified themselves as ‘competitive coach’ whereas coaches that had fewer than two years coaching at the competitive-level self-identified as ‘recreational coach’. One belief coaches held was that the label of ‘competitive coach’ was synonymous with ‘higher-level coach’: “Being seen as a competitive coach, has a lot more weight than being seen as a recreational coach.” (C15) Competitive coaches were considered to be more advanced because of their higher level of experience and expertise:

If you get a very good coach at the lower levels, you won't have to correct bad habits at the higher level. Typically clubs will put weaker coaches as recreational coaches, and what happens is that they don't do the drills, and they don't correct the scull. So they go the whole year doing it wrong and the next year you're trying to correct it. So if the higher level coaches can go and help out the rec coaches you'll have a better athlete later on, with less mistakes. (C14)

Coaches suggested that the ability to teach any skill perfectly to swimmers was the true testament of a great synchronized swimming coach and they believed that coaches with more experience were better able to achieve this task. Thus, coaches equated the label of 'competitive coach' to that of 'more advanced coach'.

Several coaches also associated athlete skill level (novice or expert) with stage of development within the long-term athlete development plan (LTAD). This belief affected the coaches' philosophies in both environments, for instance, C6 placed a greater emphasis on her philosophy of fun while she coached recreational athletes:

"[Recreational synchronized swimming] is the FUNdamentals stage, so it's supposed to be fun and about getting them comfortable in the water, learning some of the moves." On the other hand, the coaches considered their competitive athletes to be at the 'train-to-train' and 'train-to-compete' stages with an emphasis on preparing the athlete for competition, and little room within the organization for older recreational athletes: "I had a 14 year old who wanted to try it, and I said you're too old. What am I going to do? You don't want to turn people away. But you have to, that's what LTAD has done."

(NB1).

Notwithstanding competitive level, coaches indicated that they adopted flexible philosophies that they tailored to the individual, to adjust for individual demands and needs: “It’s a sport that they can excel at and that excelling is different for every athlete.” (C11) The coaches understood that having a philosophy was also about learning how to adjust to each athlete, whether she was a novice or an expert athlete.

Perceived behaviour. Although coaches acknowledged the different levels of athlete development, they rarely distinguished between their *actions* in recreational, compared to competitive, settings. As C7 explained, behaviour may not have changed much from one environment to the other: “The swimmers would view me very similarly. The fundamentals are the same in terms of how I coach between the two programs. I still go through the same process.” One factor that did change, however, was that coaches expected proficiency from experienced athletes, as opposed to improvement from novice athletes:

I couldn’t expect rec to do the most amazing tub or to do the skills perfectly like I would the competitive swimmers. My expectations would be that they tried their best, they learned the basic concept, and that with practice they improved. (C15)

Given the recreational athletes’ novice standing with many of the skills and techniques, coaches felt that pairing modeling with verbal behaviours such as instruction, would benefit the athletes: “[In recreational] I’d be demonstrating, I’d be more interactive, I’d be in the water showing and telling them what to do. You wouldn’t see me doing that in competitive [...] because showing them a ballet leg doesn’t help them anymore.” (C9)

In addition to modelling, coaches reported physically guiding recreational athletes when

teaching new skills: “With rec I’m more physical. I move them and tell them.

Competitive girls have more experience, so all I have to do is say ‘lift your feet up’ and they know what I mean.” (C8) Coaches found that the competitive athletes’ familiarity with the skills and techniques meant that corrections and instructions could be communicated verbally rather than pairing verbal and physical feedback.

Additionally, coaches felt that more experienced swimmers possessed the knowledge to correct themselves:

[In competitive] it’s a lot of self-directed work, like ‘ok we’re going to do a run-through, what do you think you need to work on?’ Or they’ll come up and go ‘I screwed it up’ and I’d say ‘well how did you do it?’ I ask them a lot of questions. I often video them and they have to point out their mistakes. (C12)

Ultimately, coaches reported modeling and physically guiding skill development with novice athletes, as opposed to more abstract and verbal coaching approaches used with competitive athletes.

Moreover, coaches stated that expert swimmers interpreted corrections constructively: “You can be stern and direct with [competitive athletes] and let them know when they’re not performing at their level. You don’t have to be afraid to give them negative feedback, they need it to move forward.” Meanwhile, coaches believed that novice swimmers would take corrections as criticism, so feedback had to be positive: “I make sure that I give rec positive corrections and I make sure that they’re able to take the feedback and use it in a positive way.” (C5)

Training structure: exploration versus commitment.

Context. Coaches described the recreational programs as an avenue for families to explore the sport without much commitment: “We run [recreational programs] for shorter terms so that the athletes can get a sense of [the sport], but they aren’t in for as long of a season if they don’t want to be.” (C10) Coaches explained that the shorter season length also meant less commitment on their part with, for instance, less time required for planning practices: “[In recreational] you never know whose going to show up for practice. So I tended to not as plan as much. I have the skills for the star levels, so I’d just work on drills and see where it went.” (C17)

Similarly, limited athlete commitment was viewed as frustrating from several of the coaches, who indicated less interest in coaching recreational levels: “It’s hard to get coaches to want to coach recreational. Recreational don’t always show up, the attendance is not great. It’s hard to put a routine together if half of them don’t show up for practice.” (C16)

Coaches also recalled challenges inherent in their effort to keep recreational athletes interested in their sport. Unlike competitive athletes who are entirely committed, recreational participants were exploring a range of activities: “It’s hard because a lot of [recreational] children are involved in different things. So you have to play games and make it fun so that they want to come to the pool.” (C18). Coaching at the recreational level described as challenging in this was because coaches had to balance teaching fundamental skills and trying to maintain participants’ interest while keeping plans flexible to account for irregular athlete attendance.

Similarly, coaches contrasted coach-athlete relationships according to the athletes' level of commitment:

We run our rec programs as a ten-lesson set, so coaches only have 10 hours with those kids. If they don't come back, we're not going to see them again. Whereas my competitive swimmers, I've coached them for years. I see them four times a week. I'm constantly talking to them.

We've developed a friendship.” (C12)

Coaches explained that the coach-athlete relationship was much easier to build with competitive swimmers, because of the amount of time spent at the pool and outside of synchronized swimming practice. By having events outside of the practice and competition environments, coaches reported being able to build a more intimate coach-athlete relationship, as well as foster friendship between teammates:

In the recreational program the commitment levels aren't there. On my competitive teams, I expect them to do one thing a month as a team, away from the pool, so they can bond. Once there's that commitment of being on a competitive team, then you have that formation as a group. As a recreational athlete, I'd suggest doing things outside of practice, but I'd never say 'this is part of your program', because they're not at that commitment level to do that. (C13)

Perceived behaviour. In light of contextual differences outlined above, coaches felt they could forge a close coach-athlete bond with their recreational athletes by joking around, laughing, and having non-synchronized swimming related talks with them.

Comparatively, this form of general communication was used in the competitive setting to give athletes a short break during hard training sessions:

One thing [the club] stressed is to make sure that we talk to our swimmers, that we are getting to know them, because as a coach it helps you plan. I try to do that with the rec swimmers, you'd see me joking around with them. In terms of competitive I think there's much more of a business-minded attitude, those two hours should be spent going through and perfecting the routine, so there's not as much time for talking. (C4)

Coaches explained that competitive synchronized swimmers commit to working hard at practice, so as a coach, they can be more direct and, at times, strict. As C2 indicates, one way to balance negative feedback was by laughing with their athletes away from the pool:

I try to make sure that, during the down time, I build a good relationship – they can joke around with me. I find when you have to yell at someone, when you have to be more intense, those moments of joking around help athletes differentiate that you're yelling about their performance, and not about them as a person.

Program structure: participation versus performance

Context. Coaches believed the primary purpose of recreational synchronized swimming was to promote fun, teach fundamental skills, and encourage continued swimming participation: “In [recreational] it's getting them used to going to practice and learning and remembering those skills, making them want to enter the competitive program next year. The focus is on fun, because we want them to come back.” (C5) In

contrast, the coaches thought the goals of competitive synchronized swimming were more performance-oriented. For example, C14 states that: “The goals for the older [competitive] athletes are to place higher than previous years, to have higher marks than previous years, to come in the top half of the figures nationally.”

According to the coaches, the defining feature of recreational and competitive sport is the absence or presence of competitions. For instance, C16 remarked that her program was recreational because the swimmers do not attend competitions: “Our recreational program, our kids don’t compete. It’s truly recreational. We want our recreational kids to move into competitive and then compete. I think the water show is enough.” Coaches thought that the recreational environment should be all about participation, and therefore did not want to introduce any performance-related activities into the program.

Coaches expressed that athletes at the recreational level were mostly motivated by factors such as the joy of participation and learning new skills. Conversely, they thought that competitive athletes were motivated by performance and personal development: “Competitive [athletes] focus on performance. They’re pushing themselves, they like putting the work in. You’re pushing them to the next level. Recreational athletes aren’t driven by the same motivation – with them it’s about creating a fun, positive experience.”

(C2)

Although certain recreational programs do allow athletes to compete, recreational competitions were described as being more informal:

If something were to go wrong [at a recreational competition] ... it’s understandable because they’re new – they’re not expected to be perfect.

It didn't change the fact that they got first for presentation. I was just laughing because it was ridiculous, if it was competitive I would've freaked out. (C1)

Furthermore, coaches reflected on recreational competitions that shifted reward structures to award all athletes (e.g., participation ribbons or 'best smile' awards).

These fundamental differences regarding participation and performance outcomes were not, however, reflected in coaches' descriptions in how practice was structured. Regardless of the level, coaches divided their practices into sections such as dry-land training, skill development, and routine:

We have an hour of land: half an hour is cardio and flex then we spend about 20 to 30 minutes on routine choreography. We do a workout in the water for approximately half an hour followed by, depending on the time of year and your focus, 45 minutes for figures and 45 minutes for team.
(C3)

Nonetheless, coaches explained that the recreational and competitive practice activities were carried-out differently. As C9 described, competitive practice activities were designed to push the swimmers toward a higher level of performance, whereas recreational practice activities were designed to engage athletes and promote sport involvement: "With the competitive girls, it's 'how can I make this the hardest thing they've ever done and still have them survive it?' But rec, it's about fun and making friends, because if they do that they'll likely come back."

Perceived behaviour. To help their competitive athletes reach these performance goals, coaches reported being more serious: "I would say that I am much harder on [the

competitive athletes], and much stricter. I have higher performance expectations of them.” (C5) The higher standards of performance at the competitive level not only changed coaches’ tone, but also affected their behaviour. This was outlined in an example from C17, who reported asking athletes to repeat a skill until their performance attained team standards – a tactic she would not employ in a recreational setting. In contrast, coaches believed that recreational athletes deserved positive reinforcement even if skills were not properly executed: “I focus on saying positive things even if it doesn’t relate to the skill: ‘that was great effort!’ I try to get them to have a good feeling, so they’ll keep working on it.” (C7) Coaches felt that the reinforcement of athletes would create a positive environment and, ultimately, continued effort and participation.

Quantitative Results

Contrasting qualitative coach descriptions of the recreational and competitive settings with observational data revealed numerous core consistencies. First, dependent samples t-tests were conducted to contrast recreational and competitive environments in terms of coders’ global ratings. Notably, in regard to global ratings of the overall environments (see Table 1 for descriptive statistics and t-test results), recreational practices were coded as being more fun, enjoyable, positive, and tailored to the athletes’ needs than the competitive environment. Conversely, the competitive practices were rated as significantly more boring and challenging than the recreational practice environments.

Table 1

Descriptive statistics and t-test results comparing global ratings of the practice environment

Global Rating Scale Item	Descriptive Statistics		Between-group comparisons		
	Recreational <i>M (SE)</i>	Competitive <i>M (SE)</i>	<i>t</i>	<i>p</i>	<i>d</i>
Overall, the practice appears to be a positive learning experience	4.96 (.18)	4.64 (.16)	-2.22	.031	0.27
Overall, the practice appears to be fun	4.40 (.15)	3.68 (.15)	-5.04	.000	0.68
Overall, the practice appears to be tailored to the athlete(s)' skill level	5.10 (.14)	4.82 (.15)	-2.31	.025	0.28
Overall, the practice appears to be enjoyable	4.54 (.14)	4.08 (.16)	-3.27	.002	0.43
Overall, the practice appears challenging for the athlete(s)	2.80 (.13)	3.28 (.16)	2.62	.012	-0.46
Overall, the practice appears to be boring	3.30 (.16)	3.86 (.15)	4.26	.000	-0.51

Note. Degrees of freedom is 49 for all items; items were scored on a scale of 1 (not at all true) to 7 (extremely true).

Furthermore, global ratings of coach demeanor (see Table 2 for descriptive statistics and t-test results) revealed that coaches appeared more at ease, friendly, attentive, and enthusiastic in the recreational environment whereas competitive coaches appeared relatively more tense, controlling, uninterested, distant, and serious.

Table 2

Descriptive statistics and t-test results comparing global ratings of coach appearance

Global Rating Scale Item	Descriptive Statistics		Between-group comparisons		
	Recreational <i>M (SE)</i>	Competitive <i>M (SE)</i>	<i>t</i>	<i>p</i>	<i>d</i>
The coach appears at ease	5.34 (.15)	4.90 (.15)	-2.40	.020	0.42
The coach appears enthusiastic	4.96 (.18)	4.06 (.21)	-4.85	.000	0.65
The coach appears organized	5.16 (.16)	4.80 (.16)	-2.39	.021	0.33
The coach appears to adopt a friendly stance	5.14 (.17)	4.26 (.19)	-4.83	.000	0.69
The coach appears attentive to her athlete(s)	5.56 (.12)	5.04 (.19)	-3.26	.002	0.46
The coach appears controlling	4.36 (.18)	4.74 (.18)	2.19	.033	-0.31
The coach appears uninterested	2.46 (.17)	3.08 (.22)	3.48	.001	-0.45
The coach appears to distance herself from her athlete(s)	2.34 (.14)	3.14 (.20)	4.08	.000	-0.65
The coach appears knowledgeable	5.68 (.11)	5.42 (.13)	-2.09	.041	0.31
The coach appears tense	2.80 (.18)	3.38 (.20)	2.52	.015	-0.44
The coach appears serious	4.06 (.16)	4.70 (.16)	3.24	.002	-0.57

Note. Degrees of freedom is 49 for all items; items were scored on a scale of 1 (not at all true) to 7 (extremely true).

In addition to the global ratings of behaviours, subsequent analyses contrasted the frequency of more specific coach behaviours. Notably, from a practical standpoint, preliminary contrasts of over 22,000 coded behaviours revealed that overall coach behaviour profiles appeared relatively consistent across the recreational and competitive environments (see Table 3). Chi square analysis was used to contrast frequencies of all 16 behaviours between both settings, $\chi^2(15, N=22304) = 217.78, p < .001, v = 0.99$, whereby it was discovered that recreational coaches used more technical instruction,

positive reinforcement, physical guidance and positive modeling. Conversely, coaches in the competitive setting used more negative evaluation, negative modeling, observation, and questioning.

Table 3

Total frequency count of coach behaviour

Behaviour	Frequency count (percentage of behaviour)	
	Recreational	Competitive
Corrective Technical Feedback	881 (7.62)	908 (8.45)
Encouragement	249 (2.15)	220 (2.05)
Error Technical	156 (1.35)	168 (1.56)
General Communication	79 (0.01)	98 (0.01)
Informing	2233 (19.31)	2224 (20.70)
Keeping Control	159 (1.37)	172 (1.60)
Negative Evaluation	54 (0.01)	97 (0.01)
Negative Modeling	199 (1.72)	237 (2.21)
Not Engaged	217 (1.87)	233 (2.17)
Observation	1122 (9.71)	1147 (10.68)
Organization	1506 (13.03)	1526 (14.20)
Physical Guidance	242 (2.09)	127 (1.18)
Positive Modeling	574 (4.96)	384 (3.57)
Positive Reinforcement	910 (7.87)	611 (5.69)
Questioning	808 (7.00)	864 (8.04)
Technical Instruction	2172 (18.79)	1727 (16.08)

Chapter 5

Discussion

As designers of the sporting environment, coaches are responsible for creating age- and level-appropriate sport programming. In addition, coaches must ensure that their own behaviour is consistent with the goals and missions of the sport setting. Research suggests that recreational and competitive sport environments are different and, consequently, that coach behaviour should differ between both environments (Côté, Young, et al., 2007; Lyle, 2002). Although this proposition is generally well supported, there is limited information about how coaches who are working at different competitive levels adapt and perceive their behaviours across these various environments. Therefore, the objective of this thesis was to explore the perceptions and actual behaviours of youth synchronized swimming coaches working concurrently at the recreational- and competitive-level. This purpose was achieved using a convergent parallel mixed-methods design (Creswell & Plano Clark, 2011) comprised of coach interviews as well as coach observation and global ratings. It was expected that coaches would perceive recreational and competitive sport environments differently and would subsequently adapt their philosophies, goals, expectations, and behaviours to suit their perceptions of each environment.

Findings from both the qualitative and observational components of the current study highlight the similarities and differences between both recreational and competitive synchronized swimming environments. When contrasting the two sources of information, it became clear that in some instances recreational programs were

considered as a developmental or ‘pre-competitive’ stage for both coaches and athletes. In line with this pattern, coaches aligned the recreational environment with elements such as exploration of sport activities and participation as a goal of sport involvement. In contrast, competitive environments were fundamentally defined by expectations of commitment and high performance. Although observations revealed differences on specific behaviours that relate to these distinctions (e.g., levels of positive reinforcement, physical guidance, and negative evaluation), coaching patterns as a whole were relatively consistent across the recreational and competitive environments. These themes will be explored in more detail as well as linked to previous literature. In addition, the main theoretical and practical findings associated with each concept will be presented in the following sections along with future research considerations and limitations of the current study.

Coach and Athlete Progression

An interesting feature identified in the coach responses was the underlying expectation that recreational programs would serve as starting points for not only athletes, but also coaches. This finding was striking, when contrasted with current understanding of recreational and competitive environments as distinct pathways. For example, research by Erickson and colleagues (2007) found that individuals who went on to become head coaches at the elite-level in sports such as basketball, track and field, volleyball, and swimming, did not often coach at the recreational-level. Recent restructuring of coach education in Canada reflects this pathway more closely. In the old National Coach Certification Program (NCCP), coaches worked their way through different levels (from 1 to 5), creating the perception that the higher the level, the better

the coach (Campbell & Sullivan, 2005). However, the new structure allows coaches to become an expert coach in one particular area (or many if they so choose) and resembles typical, and more effective coach progression (Bloom, 2011).

Research suggests that it is more common and practical for coaches to become experts in only one sport environment because of the fundamental differences between competitive and non-competitive sport coaching (Erickson et al., 2007). For instance, recreational sport is often described as an environment that is meant to promote the development of basic motor skills and emphasize fun (Côté, Young, et al., 2007; Lyle, 2002; Stafford, 2011). Conversely, competitive sport is typically described as being excellence-focused, with programs centering on advanced skill development and performance outcomes (Chelladurai, 2007; Côté, Young, et al., 2007; Lyle, 1999).

The literature suggests that athletes typically begin sport training at the recreational-level (Bloom, 1985; Côté, et al., 2003; Lyle, 2002; Schinke et al., 1995), and have a few developmental paths that they can follow. The Developmental Model of Sport Participation (DMSP) outlines three possible athletic pathways: (1) athletes can begin at the recreational-level and progress through to the competitive-level, (2) athletes can begin at the recreational-level and remain at that level, and (3) athletes begin and remain at the competitive level for their entire athletic career (Côté, 1999; Côté & Hay, 2002; Côté, et al., 2003). Though there are many factors that may influence an athlete's career trajectory, if sport clubs were to structure their programs in a similar fashion (i.e., have recreational and competitive options for athletes of any age) individuals would be able to pursue continued physical activity in a variety of sports throughout their lifetime.

In exploring potential reasons for coaches' development in the current study, it is suspected that the coaches had a unique experience compared to the coaches in Erickson and colleagues' (2007) research because of differences in the athletes' developmental pathways. More specifically, because of limited participation rates in synchronized swimming (Statistics Canada, 2014), there is less potential for clubs to establish numerous programs within different competitive levels. This was reflected in some coaches' descriptions of challenges creating even single teams at times in the competitive environment. Therefore, it may be less feasible to create and maintain a recreational program for older-aged athletes, or to have coaches specialize in one particular stream.

In addition, studies have found that individuals who restrict their development to recreational sports coaching are typically parents of athlete(s) at that level (Gilbert & Trudel, 2004a; Trudel & Gilbert, 2006). This type of arrangement is made difficult by the nature of coaching within synchronized swimming, which requires competencies that are specific to the sport, even at the recreational-level. In contrast to recreational soccer programs that may focus more on developing fundamental motor skills such as running and kicking, recreational synchronized swimming programs need to teach sport-specific skills such as eggbeater and support scull. These demands limit the pool of potential coaches to individuals who are familiar with the sport and its particular techniques.

Despite these potential reasons for the existing structure, coaches in this study acknowledged challenges inherent in a recreational-to-competitive pathway for coaches. For example, three of the coaches in this study described coaching at the recreational-level as a source of frustration, because the program type was incongruent with their natural coaching style. As the coaches found, there are certain expectations that

accompany the role of ‘recreational coach’ and certain patterns of behaviour or tasks that individuals are expected to perform in order to be successful within that role (Lyle, 2002). Thus, when coaches cannot sufficiently adapt their behaviour, coaching style, or philosophies and practices to suit the demands of the role they may be unsatisfied or frustrated with their experience in a given environment (Côté & Gilbert, 2009; Côté, Young, et al., 2007). Cases such as these further the notion that it is beneficial for the majority of coaches to receive training and remain in one particular sport environment, as not all coaches are well suited for a recreational-to-competitive career path.

Moreover, the coaches in this study highlight that the current structure is not only limiting to their career trajectory, but also to the development of the athletes that wish to remain at the recreational-level. Studies have found that challenging athletes beyond a level with which they are comfortable can lead to frustration, drop out, and other negative consequences (Fraser-Thomas, Côté, & Deakin, 2008). In terms of this study, this means that swimmers in clubs with no advanced-recreational programs will either be pushed into the competitive program, or will have to abandon the sport once they reach an age where swimming at the recreational-level is not possible.

Provided that numerous sports share the challenges described by coaches in this study, such as limited participant pools and sport-specific skill development even for young athletes, it is important to explore the implications for athlete development and sport structure. Notably, the recreational and competitive athletes who work with the same coach could be given a measure of coach-athlete interaction to examine the coach-athlete relationship in more depth. In addition, it is important to explore how existing NCCP guidelines could be adapted to such environments in light of the challenges faced -

perhaps by ensuring coaches are educated about the needs and requirements of athletes at all levels of sport.

Competitive and Recreational Program Structure

Although the coaching and athlete development streams overlapped across environments, it is important to reflect on coaches' underlying distinctions between competitive and recreational sport structures. Coaches' focus on participation and exploration of sport opportunities falls in line with literature describing recreational sport and its focus on interest, excitement, and inherent enjoyment through skill-based activities made to resemble games (Kalinowski, 1985). Results from the current study support the existing literature regarding the view of competitive environments as being excellence-focused and centered on performance-related outcomes (Chelladurai, 2007; Côté, Young, et al., 2007; Lyle, 2002). Coaches at the competitive level tend to equate winning to fun and often measure a program's success by the competitive outcome (Bengoechea, Streat, & Williams, 2004). Moreover, for some of the coaches the desire to achieve perfection and win in the competitive setting is what dictated the structure of the practice activities; making it essential to include challenging activities and repetitive skill-building drills.

Côté and Hay (2002) used the notions of 'deliberate play' and 'deliberate practice' to explain how the different environments might structure their practice activities. Deliberate play (Côté, 1999; Côté & Hay, 2002) refers to inherently enjoyable organized activities designed to provide active and pleasurable participation (e.g., splashing around in the water). On the other hand, deliberate practice activities are specifically designed to improve the current level of performance (e.g., swim workouts

and eggbeater drills) and thus require concerted effort and are not seen as enjoyable (Ericsson, Krampe, & Tesch-Römer, 1993). Skilled coaches will find a way to balance these two types of activities by integrating skill development into activities that are still perceived as enjoyable by the athletes. In this particular study, these balanced activities seemed more common in the recreational setting, as coaches had to teach the participants basic skills but in a way that accounted for their participants' short attention spans. Overall, the recreational sessions were rated as more fun, enjoyable, positive, and tailored to the athletes' needs.

The demands associated with competitive environments typically make it difficult to integrate pleasurable activities into exhaustive training routines (Bengoechea, et al., 2004). Indeed, fun appears to be restricted by competition, which may be why the competitive environments in this study were rated as more challenging and boring than the recreational practice settings. Similar to the findings in the present study, Streat and Holt (2000) found that much of the practice activities that intend to foster skill development are done in a way that detracts from 'fun'. Although coaches adopted philosophies of fun and excellence that they believed applied to athletes in both recreational and competitive settings, they felt that the importance of skill development in the competitive setting meant that 'fun' had to emerge in different ways than in the recreational environment.

According to Scanlan and colleagues, enjoyment can be both achievement and non-achievement based as well as being intrinsic or extrinsic in nature (Scanlan & Lewthwaite, 1986; Scanlan & Simons, 1992). In the recreational environment, the motivation is more achievement-intrinsic (the challenge and feelings of success involved

in learning skills) and non-achievement-intrinsic motivation (sport itself as an enjoyable experience) whereas sport at the competitive-level typically involves more achievement-extrinsic (winning) and non-achievement-extrinsic motivation (the prestige of being an athlete). This distinction between achievement and non-achievement dimensions is particularly useful in order to differentiate between recreational and competitive environments. Despite holding overarching philosophies across both levels, the coaches in this study typically placed a larger emphasis on the philosophy of fun in the recreational environment, and excellence in the competitive environment. Coaches were aware that fun and excellence had different meanings for athletes in recreational programs than they did for athletes in competitive programs and as such they modified their programs to demonstrate these differences.

Along these lines, it appeared that coaches used distinct approaches to satisfy competitive and recreational simmers' needs for enjoyment and relatedness to others. Whereas fun was integrated into practice activities for recreational athletes, coaches indicated that competitive environment practice and competitions were more 'professional' and relied on team building activities and social events to have fun. In other words, coaches in competitive settings relied on what is termed the *pizza parlor phenomenon* (Scanlan & Simons, 1992; Scanlan et al., 1993) whereby enjoyment is something experienced after the hard work and skill learning are over. Indeed, there are well-known benefits of social and team-building activities for satisfaction and group functioning (Bruner & Spink, 2010; 2011) and coaches explained that their competitive athletes had the benefit of travelling together to competitions, which helped their athletes form closer relationships. Nonetheless, Scanlan et al. (1993) highlight the potential

danger of completely separating enjoyment and relatedness skill development in both practice and competitions. In light of this consideration, it is important to further explore how competitive coaches strike a balance between ‘fun’ and ‘hard work’ in the competitive setting. In contrast, it is important to consider whether recreational athletes are disadvantaged by having fewer opportunities to interact with teammates in more social contexts like travelling to competitions or through team-building.

As another example of promoting intrinsic motivation “in the water,” recreational programs even modified the competitive events that were held to promote equal opportunities and intrinsic motivation – rewarding outcomes such as fun, skill development, and participation (Torres & Hager, 2007). In accordance with the FUNdamental stage of the sport’s long-term athlete development plan (LTAD; Canadian Sport for Life, 2011), recreational competitions feature amendments to judging criteria and rules and ensure that each athlete receives a participation ribbon. Since these events are taken less seriously, coaches are under less pressure to deliver perfect performances when compared to the stress reported by coaches in competitive environments (e.g., Fortier et al., 1995). These reasons may explain why coaches appeared more at ease, friendly and attentive in the recreational environment and relatively more tense, controlling, uninterested, distant, and serious in the competitive environment.

When considering how to integrate more opportunities for intrinsic motivation within competitive training and competition, it may be useful to host separate programs or events that are focused on these goals. For example, competitive sport programs may consider creating a “recreational summer camp” for competitive athletes to allow their swimmers to develop their skills using more deliberate play activities in an environment

with fewer stresses and deadlines. This type of programming could serve as a way to alleviate stress from the coach, by enabling them to teach and correct skills through the use of games and free-play.

Behaviour Patterns across Recreational and Competitive Settings

Another key finding of this research was in the observed frequency differences between seven of the coded coach behaviours. Notably, the coaches in the current study employed physical guidance and positive modeling more often with their recreational athletes. These results are consistent with those of Zeng and Leung (2008) who found that physical education teachers used guidance and modeling more frequently with their novice students than with their expert athletes. Furthermore, modeling and physical guidance can be useful in teaching motor skills (Patterson & Lee, 2008) and visual demonstrations engage the athletes in the learning process more so than verbalizations (Hodges & Franks, 2002). Thus, it is expected that the coaches opted for physical guidance and positive modeling to help their recreational athletes develop basic skills correctly and to aid them in creating body awareness.

The coaches in the current study stated that they paired technical instruction with positive modeling or physical guidance in the recreational setting to provide their novice athletes with visual (modeling), auditory (technical instruction), and kinesthetic (physical guidance) cues would help them learn more quickly. Turnnidge and colleagues (2007) reported similar results in a study of a coach in a model youth swimming program. More specifically, the exemplary coach consistently incorporated modeling or demonstration with her technical instruction, which she found to be beneficial for motor skill acquisition.

In contrast, competitive coaches paired observation with guided questioning or negative modeling to a greater extent, plausibly to help athletes correct and learn for themselves. This is a reasonable approach, as observation is becoming increasingly recognized as a deliberate and useful coaching strategy (Potrac, Jones, & Cushion, 2007). Observation allows coaches time to analyze the situation and gauge the appropriate response (Cushion & Jones, 2001). Furthermore, the combination of observation and guided questioning or negative modeling was thought to help competitive athletes evaluate their performance from the coaches' point of view, which the coaches in the current study suggested would help better prepare the athletes to become coaches in their own right once they decided to stop swimming.

Instead of questioning, coaches chose to follow observations in the recreational setting with positive reinforcement. Studies have shown that coaches who used more positive reinforcement and instruction were better liked and created an atmosphere that was more fun, cohesive, and had lower drop-out rates (Barnett, Smoll, & Smith, 1992; Smoll, Smith, Barnett, & Everett, 1993). Given the goals of recreational programs outlined in the previous paragraphs it is understandable why coaches would engage in these behaviours more frequently in this particular setting.

These differences in frequency may be a sign that coaches were adapting their behaviours to fit with the distinctive goals and demands of the recreational and competitive environments. However, it is also plausible that the differences in behaviours simply reflect differences in the types of activities involved in competitive, as opposed to recreational, practices. For example, observation and questioning may be more appropriate after running-through routines that are common in competitive training,

whereas instruction may reflect the more frequent training of new skills and games in recreational practices. Future research should examine whether certain coach behaviours are more prevalent during certain types of practice activities.

Despite the identified differences in specific behaviour frequencies, it is important to note that the overall percentages of behaviours that coaches displayed in the current study reveal patterns that remain stable across environments. These findings are supported by other research studies (e.g., LaForge et al., 2009; Ford et al., 2010; Sullivan et al., 2012), which found that a coach's behaviour remains relatively consistent despite competitive-level, NCCP training, and level of perceived self-efficacy. Ultimately, the similarity in coaching patterns between the two settings could be interpreted to mean that either (a) coaches are not modifying their behaviour appropriately for their environments (Côté, Young, et al., 2007; Lyle, 2002; Kirk et al., 2006), or (b) that coaches were indeed considering the recreational program to be more of a 'pre-competitive' program that required a more achievement-focused environment than a truly recreational program that would be more enjoyment-focused.

Another explanation for these findings is that behavioural differences may be more nuanced than what current research would suggest. For instance, it may be that researchers need to observe and code *how* coaches are saying and doing things, rather than simply measuring and counting the occurrence of what they are doing. To help address some of these speculations, it may be of interest to investigate whether a coach's delivery (tone, emotion, body language) changes when they are working with athletes in different environments.

Chapter 6

Conclusions

The purpose of this study was to examine the perceptions and behaviour of coaches working in both recreational and competitive synchronized swimming environments. Using a mixed-methods convergent parallel design, this study addressed three research questions: (1) what are coaches' perceptions of the structure of the recreational and competitive sport environment? (2) do coaches perceive that their behaviour differs between recreational and competitive sport environments? and (3) how do the actual sport environments and actual coaches' behaviours compare to the coaches' perceptions? Resultant data captured a detailed understanding of coaches' perceptions, experiences, and behaviours within recreational and competitive synchronized swimming environments.

The unique feature of this thesis is that coaches had experience working with both recreational and competitive athletes, and therefore direct comparisons could be made between coaches' perceptions of and behaviours within the two levels. Analysis of the results led to three striking findings: first, most synchronized swimming clubs expect their coaches and athletes to progress in a linear recreational-to-competitive pathway. Second, coaches believed that different goals and expectations were required across competitive and recreational settings and, hence designed their practices and seasonal progression according to the program. Lastly, although observations revealed differences on specific behaviours (e.g., levels of positive modeling, instruction, and questioning) related to coaches' perceived distinctions between recreational and competitive

environments, coaching patterns as a whole were relatively consistent across the recreational- and competitive-levels. The findings of this mixed-methods examination of coaches' perceptions and behaviours offer insight into the nature of different youth sport environments.

Limitations and Future Directions

The implications of the present study should be considered along with the limitations inherent to the study. First, this study was conducted using coaches from only one sport – and particularly a sport consisting almost entirely of female athletes and coaches – which limits the generalizability of the findings. However, due to the exploratory nature of this study, the number of coaches and the variety of sports had to be kept to a minimum to ensure that the data could be coded and analysed with enough detail. The direction provided by the resulting findings might now be studied in greater breadth in future research.

Moreover, due to factors beyond participants' control (e.g., club size and limited resources) recreational synchronized swimming programs are often viewed as 'pre-competitive' programs rather than a distinct stream in which athletes can continue. As a result, future research should investigate coach behaviour between more distinct levels, such as comparing recreational coaches and coaches working with national stream athletes.

It is also important to note that this study focused on the perceptions and behaviours of coaches and did not include any measures of athlete perceptions or outcomes. Given what is known regarding the coach's influence on athlete development (Eccles et al., 2003; Fraser-Thomas et al., 2005; Lemyre et al., 2002) as well as the

possibility that coaches may be working with athletes in more than one environment, it is essential to examine how coaches working concurrently in multiple settings are perceived by their different athletes. This type of investigation can inform coach education programs and sport organizations, and be necessary in providing empirical support that speaks to the benefits of following the new NCCP structure. One way to undertake this task would be to utilize the CBAS (Smith et al., 1977) and the accompanying CBAS Player Perceived Behavior Scale/CBAS Coach-Perceived Behavior Scale (Smith, Smoll, & Curtis, 1979) to compare coaches' actual behaviour to both their own and their athletes' perceptions of coach behaviour. Employing these measures simultaneously with coach interviews will allow researchers to identify coach characteristics that athletes at different levels perceive to be more positive and negative.

A third limitation of this study concerns the narrow scope of the observation instrument, whereby only coach behaviour was coded and elements such as coach-athlete interactions and coaching tone were overlooked. Because research indicates that behaviour is bi-directional (Erickson et al., 2011), it would be useful to measure coach-athlete interactions in future studies to complete the "picture" of coach behaviour. Moreover, coach behaviour was only measured in terms of observable content. Forthcoming research should thus attempt to include modifiers such as tone, emotion, and body language in observation studies to bring more depth to and help paint a more complete picture of coach behaviour.

In all, this study has contributed to the growing body of literature that has featured coaches at the center of the sport setting. Moreover, the results show that the differences between recreational and competitive youth sport programs may vary from sport-to-sport

in regards to the national structuring of the sport levels. In addition, findings from the current study coupled with those from past studies of coaching behaviour allude to the fact that actual behaviour patterns may remain relatively stable across sport levels.

Future research should continue to examine the distinguishing features of various sport levels as well as coaches' behaviour patterns within them. This line of research will help to build on the existing knowledge base of how coaches contribute to the youth sport experience.

Recommendations

The findings of the present study lend themselves to practical recommendations for coaches and coach education programs. More specifically, coaches who are working or transitioning between multiple sport environments should take the time to examine the goals of each setting. Coaches can make note of these goals on their practice plans to serve as a reminder of how they might tailor their practices and behaviours to suit the environmental demands. Coaches at the recreational-level should also try to incorporate more athlete-led play activities. That is, rather than assume control of all practice activities coaches can ask for athlete input, especially when it comes to planning games and incorporating fun into recreational practices. Clubs may also want to consider pairing coaches at the recreational-level with interested parents. This form of co-coaching would allow the certified coach to focus on technical skills and sport-specific development, while the parent could emphasize the fun and playful aspects of the sport.

In terms of personal growth and development, coaches may want to consider starting a reflexive journal. This practice would help individuals deepen their self-awareness and might aid in the identification of certain issues. Reflexive journaling

could also help coaches develop and expand on their coaching philosophies, values, and beliefs. Finally, coaches could also include their athletes into the reflection process, by having them participate in reflexive journaling as well. This would allow coaches and athletes to discuss their perceptions and reactions to practice activities and behaviour and may lead to more open communication and a closer coach-athlete relationship. Lastly, coaches who understand that their personality or coaching style might not be suitable to a particular sport environment should address this issue. This may require the coach to contemplate changes they can make within themselves as well as modifications that can be made to the environment. Additionally, coaches should discuss their frustrations with the head coach of the club so that (a) they can troubleshoot options together, (b) the head coach can make adjustments, and (c) the head coach can avoid placing the coach in similar situations in the future.

Furthermore, it was identified that the current structure of the NCCP might not be the best option for all sports. For instance, sports that do not have large bodies of participants or a wide selection of available coaches may be disadvantaged by the changes in coach education programming. It would be important to consider the opinions and perceptions of coaches from a variety of sports and a range of clubs sizes regarding future program structure changes. It is also encouraged that providers of coach education experiment with the suggestions and collaborate with coaching scholars to evaluate how coaches respond to the adaptations.

Coach education programs may consider changing the format of certain technical courses from lecture-based to discussion-based or experienced-based learning. This adjustment would allow coaches of different background to discuss their past

experiences as well as troubleshoot how they might handle problems or situations they have yet to encounter. Moreover, NCCP courses should also look to include a section involving coaching contexts, coaching philosophies and self-reflection practices into their future programs, as this would help increase a coaches' awareness about their beliefs and motivations and create a better alignment between athletes' needs at different stages of development and coaches' behaviours.

References

- Agnew, M. M. (1978). *Comparison of female teaching and coaching behaviors in secondary schools*. (Unpublished master's thesis). Ithaca College.
- Barnett, N. P., Smoll, F. L., & Smith, R. E. (1992). Effects of enhancing coach-athlete relationships on youth sport attrition. *The Sport Psychologist*, 6, 111-127.
- Bloom, B. S. (1985). *Developing talent in young people*. New York, NY: Ballantine.
- Bloom, G. A. (2011). Coaching psychology. In P. R. E. Crocker (Ed.), *Sport and exercise psychology: A Canadian perspective* (2nd ed., pp. 278-305). Toronto: Pearson.
- Bengoechea, G. E., Streat, W. B., & Williams, D. J. (2004). Understanding and promoting fun in youth sport: Coaches' perspectives. *Physical Education and Sport Pedagogy*, 9(2), 1-18.
- Brannen, J. (2007). Mixing methods: The entry of qualitative and quantitative approaches into the research process. *International Journal of Social Research Methodology*, 8, 173-184.
- Bruner, M. W., & Spink, K. S. (2010). Evaluating a team building intervention in a youth exercise setting. *Group Dynamics: Theory, Research, & Practice*, 14, 304-317.
- Bruner, M. W., & Spink, K. S. (2011). Effects of team building on exercise adherence and group task satisfaction. *Group Dynamics: Theory, Research, & Practice*, 15, 161-172.

- Buskist, W., Sikorski, J., Buckley, T., & Saville, B. K. (2002). Elements of master teaching. In S. F. Davis & W. Buskist (Eds.), *The teaching of psychology: Essays in honor of Wilbert J. McKeachie and Charles L. Brewer* (pp. 27-39). Mahwah, NJ: Lawrence Erlbaum Associates, Inc.
- Camerino, O., Castañer, M., & Anguera, M. T. (Eds.). (2012). *Mixed methods research in the movement sciences: Cases in sport, physical education and dance*. London, England: Routledge.
- Campbell, T., & Sullivan, P. J. (2005). The effect of a standardized coaching education program on the efficacy of novice coaches. *Avante*, *11*, 38-45.
- Canadian Amateur Synchronized Swimming Association. (2013). *Synchro Canada Official Rule Book*. Retrieved from:
<http://www.synchro.bc.ca/assets/technical/2013-RuleBook-Sep2013.pdf>
- Canadian Sport for Life. (2011). *Synchronized Swimming*. Retrieved from:
<http://canadiansportforlife.ca/find-quality-sport-programs/synchronized-swimming>
- Charmaz, K. (2006). *Constructing grounded theory: A practical guide through qualitative analysis*. London, England: Sage.
- Chaumeton, N. R., & Duda, J. L. (1988). Is it how you play the game or whether you win or lose? The effect of competitive level and situation on coaching behaviours. *Journal of Sport Behavior*, *11*, 157-174.
- Chelladurai, P. (2007). Leadership in sports. In G. Tenenbaum & R. C. Eklund (Eds.), *Handbook of sport psychology* (pp. 113-135). New York, NY: Wiley.

- Coaching Association of Canada (2008). *The NCCP model*. Retrieved from http://www.coach.ca/eng/certification/nccp_for_coaches/nccp_model.cfm.
- Côté, J. (1999). The influence of the family in the development of talent in sport. *The Sport Psychologist, 13*, 395-417.
- Côté, J., Baker, J., & Abernethy, B. (2003). From play to practice: A developmental framework for the acquisition of expertise in team sports. In J. Starkes, & K.A. Ericsson (Eds.), *Expert performance in sports: Advances in research on sport expertise* (pp. 89-110). Champaign, IL: Human Kinetics.
- Côté, J., Baker, J., & Abernethy, B. (2007). Practice and play in the development of sport expertise. In R. Eklund & G. Tenenbaum (Eds.), *Handbook of Sport Psychology* (3rd ed.), (pp. 184-202). Hoboken, NJ: Wiley.
- Côté, J., & Gilbert, W. (2009). An integrative definition of coaching effectiveness and expertise. *Journal of Sport Science and Coaching, 4*, 307-323.
- Côté, J., & Hay, J. (2002). Children's involvement in sport: A developmental perspective. In J. M. Silva & D. E. Stevens (Eds.), *Psychological foundations of sport* (pp. 484-502). Boston: Allyn & Bacon.
- Côté, J., Salmela, J. H., Trudel, P., Baria, A., & Russell, S. (1995). The coaching model: A grounded assessment of expert gymnastic coaches' knowledge. *Journal of Sport and Exercise Psychology, 16*, 1-17.
- Côté, J., & Sedgwick, W.A. (2003). Effective behaviors of expert rowing coaches: A qualitative investigation of Canadian athletes and coaches. *International Sports Journal, 7*, 62-77.

- Côté, J., Young, B., North, J., & Duffy, P. (2007). Towards a definition of excellence in sport coaching. *International Journal of Coaching Science, 1*, 3-17.
- Creswell, J. W., & Garrett, A. L. (2008). The "movement" of mixed methods research and the role of educators. *South African Journal of Education, 28*, 321-333.
- Creswell, J., & Plano Clark, V. L. (2011). *Designing and conducting mixed methods research*. London: Sage.
- Cross, N. (1995). Coaching effectiveness in hockey: A Scottish perspective. *Scottish Journal of Physical Education, 23*, 27-39.
- Cushion, C. (2010). Coach behaviour. In J. Lyle & C. Cushion (Eds.). *Sports coaching: Professionalisation and practice* (pp. 43-62). Toronto, Ontario: Elsevier.
- Cushion, C. J., & Jones, R. L. (2001). A systematic observation of professional top-level youth soccer coaches. *Journal of Sport Behavior, 24*, 354-376.
- Duda, J. L. (1989). The relationship between task and ego orientation and the perceived purpose of sport among male and female high school athletes. *Journal of Sport & Exercise Psychology, 11*, 318-335.
- Eccles, J. S., & Barber, B. L. (1999). Student council, volunteering, basketball, or marching band: What kind of extracurricular involvement matters? *Journal of Adolescent Research, 14*, 10-43.
- Eccles, J. S., Barber, B. L., Stone, M. R., & Hunt, J. (2003). Extracurricular activities and adolescent development. *Journal of Social Issues, 59*, 865-889.
- Elley, D., & Kirk, D. (2002). Developing citizenship through sport: The impact of a sport-based volunteer programme on young sport leaders. *Sport, Education and Society, 7*, 151-166.

- Ericsson, K.A. "The acquisition and maintenance of expert's superior performance: How deliberate practice causes improvements in athletic performance." Canadian National Coaching Institute-Coaching Summit Conference, Victoria, BC. September 2001. Conference Presentation.
- Ericsson, K. A., Krampe, R. T., & Tesch-Romer, C. (1993). The role of deliberate practice in the acquisition of expert performance. *Psychological Review, 100*, 363-406.
- Erickson, K. (2013). *Interpersonal interactions and athlete development in different youth sport contexts*. (Unpublished doctoral dissertation). Queen's University, Canada.
- Erickson, E., Bruner, M. W., MacDonald, D. J., & Côté, J. (2008). Gaining insight into actual and preferred sources of coaching knowledge. *International Journal of Sports Science & Coaching, 3*, 527 - 538.
- Erickson, K., Côté, J., & Fraser-Thomas, J. (2007). The sport experiences, milestones, and educational activities associated with the development of high performance coaches. *The Sport Psychologist, 21*, 302-316.
- Erickson, K., Côté, J., Hollenstein, T., & Deakin, J. (2011). Examining coach-athlete interactions using state space grids: An observational analysis in competitive youth sport. *Psychology of Sport and Exercise, 12*, 645-654.
- Erickson, K., & Gilbert, W. (2013). Coach-athlete interactions in children's sport. In J. Côté & R. Lidor (Eds.). *Conditions of children's talent development in sport* (pp.139-156). Morgantown, WV: Fitness Information Technology.

- European Coaching Council. (2007). Review of the EU 5-level structure for the recognition of coaching competence and qualifications. *European Network of Sports Science*. Köln, Germany: Education and Employment.
- Farrow, D., Baker, J., & MacMahon, C. (2008). *Developing sports expertise: Researchers and coaches put theory into practice*. NY: Routledge.
- Ford, P. R., Yates, I., & Williams, A. M. (2010). An analysis of practice activities and instructional behaviours used by youth soccer coaches during practice: Exploring the link between science and application. *Journal of Sport Sciences*, 28, 483-495.
- Fortier, M. S., Vallerand, R. J., Brière, N. M., & Provencher, P. J. (1995). Competitive and recreational sport structures and gender: A test of their relationship with sport motivation. *International Journal of Sport Psychology*, 26, 24-39.
- Fraser-Thomas, J. L., Côté, J., & Deakin, J. (2005). Youth sport programs: An avenue to foster positive youth development. *Physical Education and Sport Pedagogy*, 10, 19-40.
- Fraser-Thomas, J., Côté, J., & Deakin, J. (2008). Understanding dropout and prolonged engagement in adolescent competitive sport. *Psychology of Sport and Exercise*, 9, 645-66.
- Gardner, R. E., & Janelle, C. M. (2002). Legitimacy judgements of perceived aggression and assertion by contact and non-contact sport participants. *International Journal of Sport Psychology*, 33, 290-306.
- Gilbert, W., & Trudel, P. (2001). Learning to coach through experience: Reflection in model youth sport coaches. *Journal of Teaching in Physical Education*, 21, 16-34.

- Gilbert, W., & Trudel, P. (2004a). Analysis of coaching science research published from 1970- 2001. *Research Quarterly for Sport and Exercise*, 75, 388-399.
- Gilbert, W., & Trudel, P. (2004b). Role of the coach: How model youth team sport coaches frame their roles, *The Sport Psychologist*, 18, 21-43.
- Gilbert, W., Trudel, P., & Haughian, L. P. (1999). Interactive decision making factors considered by coaches of youth ice hockey during games. *Journal of Teaching in Physical Education*, 18, 290-311.
- Goldsmith, W. (2011). The performance clock: The most important concept in high performance sport. *The World Swimming Coaches Association Newsletter*, 9(3), 1-10.
- Gray, G. R., & Curtis, P. F. (1991). Risk management behaviours of soccer coaches at three levels of varsity competition. *Applied Research in Coaching and Athletics Annals*, 6, 149-164.
- Gray, G. R., & McKinstrey, J. P. (1994). Risk management behaviors of NCAA Division III head football coaches. *Journal of Legal Aspects of Sport*, 4, 63-71.
- Griffin, L., & Butler, J. (2005). *Teaching games for understanding: Theory, research and practice*. Chicago, Illinois: Human Kinetics.
- Hodges, N. J., & Franks, I. M. (2002). Modelling coaching practice: The role of instruction and demonstration. *Journal of Sports Sciences*, 20, 793-811.
- Hollenstein, T., Granic, I., Stoolmiller, M., & Snyder, J. (2004). Rigidity in parent-child interactions and the development of externalizing and internalizing behavior in early childhood. *Journal of Abnormal Child Psychology*, 32, 595-607.

- Horn, T. S. (2008). Coaching effectiveness in the sport domain. In T. S. Horn (Ed.), *Advances in sport psychology* (pp. 239-267). Champaign, IL: Human Kinetics.
- Jones, R. L., Armour, K. M., & Potrac, P. (2003). Constructing expert knowledge: A case study of a top-level professional soccer coach. *Sport, Education and Society*, 8, 213-229.
- Kalinowski, A. G. (1985). The development of Olympic swimmers. In B. S. Bloom (Ed.), *Developing talent in young people* (pp. 139-192). New York: Ballantine.
- Kasson, P. L. (1974). Teaching and coaching behavior of university physical educators. *Dissertation Abstracts International*, 35, 6496A.
- Kazdin, A. E. (1980). *Research design in clinical psychology*. NY: Harper & Row.
- Kirk, D., MacDonald, D., & Sullivan, M. (2006). *The handbook of physical education*. London: Sage.
- Krippendorff, K. (2013). *Content analysis: An introduction to its methodology* (3rd ed.). Thousand Oaks, CA: Sage.
- LaForge, K., Sullivan, P. J., & Bloom, G. A. (2012). Coaching behaviours in Canadian youth sport. *Athletic Insight: The Online Journal of Sport Psychology*, 4, 251-263.
- Lemyre, P., Roberts, G. C., & Ommundsen, Y. (2002). Achievement goal orientations, perceived ability, and sportpersonship in youth soccer. *Journal of Applied Sport Psychology*, 14, 120-136.
- Lyle, J. (1999). Coaches' decision making. In N. Cross & J. Lyle (Eds.), *The coaching process: Principles and practice for sport* (pp. 210-232). Oxford, England: Butterworth Heinemann.

- Lyle, J. (2002). *Sport coaching concepts: A framework for coaches' behaviour*. New York, NY: Routledge.
- McCallister, S. G., Blinde, E. M., & Weiss, W. M. (2000). Teaching values and implementing philosophies: Dilemmas of the youth sport coach. *Physical Educator*, 57, 35-45.
- Nash, C., & Collins, D. (2006). Tacit knowledge in coaching: Science or art. *Quest*, 48, 234-257
- Patterson, J. T., & Lee, T. D. (2008). Organizing practice: The interaction of repetition and cognitive effort for skilled performance. In D. Farrow, J. Baker, & C. MacMahon (Eds.), *Developing sport expertise: researchers and coaches put theory into practice*. (pp. 119-134). London, England: Routledge.
- Patton, M. Q. (2002). *Qualitative evaluation and research methods* (3rd ed). Newbury Park, CA: Sage.
- Piéron, M., & Goncalves, C. (1987). Participation engagement and teacher's feedback in physical education teaching and coaching. In G. T. Barrette, R. S. Feingold, C. R. Rees, & M. Pieron (Eds.), *Myths, models, and methods in sport pedagogy* (pp. 249-254). Champaign, IL: Human Kinetics.
- Popper, K. (1959) *The Logic of scientific discovery*. (Reprinted 2004, New York, NY: Routledge.
- Potrac, P., Brewer, C., Jones, R., Armour, K., & Hoff, J. (2000). Toward a holistic understanding of the coaching process. *Quest*, 52, 186-199.

- Potrac, P., Jones, R. L., & Armour, K. M. (2002) 'It's all about getting respect': The coaching behaviours of an expert English soccer coach. *Sport, Education and Society*, 7, 183-202.
- Potrac, P., Jones, R., & Cushion, C. (2007). Understanding power and the coach's role in professional English soccer: Preliminary investigation of coach behaviour. *Soccer and Society*, 8, 33-49.
- Rupert, T., & Buschner, C. (1989). Teaching and coaching: A comparison of instructional behaviors. *Journal of Teaching in Physical Education*, 9, 49-57.
- Rutten, E. A., Stams, G. J. J. M., Biesta, G. J. J., Schuengel, C., Dirks, E., & Hoeksma, J. B. (2007). The contribution of organized youth sport to antisocial and prosocial behaviour in adolescent athletes. *Journal of Youth Adolescence*, 36, 255-264.
- Scanlan, T. K., Carpenter, P. J., Lobel, M., & Simons, J. (1993). Sources of enjoyment or youth sport athletes. *Pediatric Exercise Science*, 5, 275-285.
- Scanlan, T. K., & Lewthwaite, R. (1986). Social psychological aspects of competition for male youth sport participants: IV. Predictions of enjoyment. *Journal of Sport Psychology*, 8, 25-35.
- Scanlan, T. K., & Simons, J. P. (1992). The construct of sport enjoyment. In G. C. Roberts (Ed.) *Motivation in sport and exercise* (pp. 199-215). Champaign, IL: Human Kinetics.
- Schinke, R. J., Bloom, G. A., & Salmela, J. H (1995). The career stages of elite Canadian basketball coaches. *Avante*, 1, 48-62.
- Shields, D., & Bredemeier, B. (2009). *True competition: A guide to pursuing excellence in sport and society*. Champaign, IL: Human Kinetics.

- Sirotic, A.C., Coutts, A. J., Knowles, H., & Catterick, C. (2009). A comparison of match demands between elite and semi-elite rugby league competition. *Journal of Sports Science, 27*, 203-211.
- Smith, M., & Cushion, C. J. (2006). An investigation of the in-game behaviours of professional, top level youth soccer coaches. *Journal of Sport Sciences, 24*, 355-366.
- Smith, R. E., & Smoll, F. L. (2007). Social-cognitive approach to coaching behaviors. In S. Jowett & D. Lavallée (Eds.), *Social psychology in sport* (pp. 75-89). Champaign, IL: Human Kinetics.
- Smith, R. E., Smoll, F. L., & Curtis, B. (1979). Coach effectiveness training: A cognitive behavioral approach to enhancing relationship skills in youth sport coaches. *Journal of Sport Psychology, 1*, 59-75.
- Smith, R. E., Smoll, F. L., & Hunt, E. B. (1977). A system for the behavioural assessment of athletic coaches. *Research Quarterly, 48*, 401-407.
- Smoll, F. L., & Smith, R. E. (1989). Leadership behaviors in sport: A theoretical model and research paradigm. *Journal of Applied Social Psychology, 19*, 1522-1551.
- Smoll, F. L., & Smith, R. E. (2002). Coaching behavior research and intervention in youth sports. In F. L. Smoll & R. E. Smith (Eds.), *Children and youth in sport: A biopsychosocial perspective* (2nd ed., pp. 211–233). Dubuque, IA: Kendall/Hunt.
- Smoll, F. L., Smith, R. E., Barnett, N. P., & Everett, J. J. (1993). Enhancement of children's self-esteem through social support training for youth sport coaches. *Journal of Applied Psychology, 78*, 602-610.
- Stafford, I. (2011). *Coaching children in sport*. New York, NY: Routledge.

- Statistics Canada (2008). *Canadian Social Trends: Kid's Sports*. Retrieved from <http://www.statcan.gc.ca/pub/11-008-x/2008001/article/10573-eng.htm>
- Statistics Canada (2014). *Kid's Sports*. Retrieved from <http://www.statcan.gc.ca/pub/11-008-x/2008001/article/10573-eng.htm>
- Strean, W. (1998). Possibilities for qualitative research in sports psychology. *The Sport Psychologist*, 12, 333-345.
- Strean, W. B., & Holt, N. L. (2000). Players', coaches', and parents' perceptions of fun in youth sport. *Avante*, 6, 84-98.
- Sullivan, P., Paquette, K. J., Holt, N. L., & Bloom, G. A. (2012). The relation of coaching context and coach education to coaching efficacy and perceived leadership behaviours in youth sport. *The Sport Psychologist*, 26, 122-134.
- Synchro Swim Ontario (2013). *Synchro Swim Ontario Provincial Rulebook 2013-2014*. Retrieved from: <http://synchroontario.com/wp-content/uploads/2013/09/Synchro-Ontario-Rulebook-2013-14-Sept-19-2013.pdf>
- Tashakkori, A., & Teddlie, C. (2009). Integrating qualitative and quantitative approaches to research. In L. Bickman & D. J. Rog (Eds.), *Handbook of applied social research methods* (2nd ed., pp. 283-317). Thousand Oaks, CA: Sage.
- Tharp, R. G., & Gallimore, R. (1976). Basketball's John Wooden: What a coach can teach a teacher. *Psychology Today*, 9, 74 -78.
- Torres, C. R., & Hager, P. F. (2007). De-emphasizing competition in organized youth sport: Misdirected reforms and misled children. *Kinesiology, Sport Studies and Physical Education Faculty Publications*. Paper 18.

- Trudel, P., & Gilbert, W. D. (2006). Coaching and coach education. In D. Kirk, M. O'Sullivan, & D. MacDonald (Eds.), *Handbook of physical education* (pp. 516-539). London, England: Sage.
- Turnnidge, J., Côté, J., Hollenstein, T., & Deakin, J. (2014). A direct observation of the dynamic content and structure of coach-athlete interactions in a model sport program. *Journal of Applied Sport Psychology, 26*, 225-240.
- Vealey, R. (2005). *Coaching for the inner edge*. Morgantown, WV: Fitness Information Technologies.
- Vergeer, I., & Lyle, J. (2007). Mixing methods in assessing coaches' decision making. *Research Quarterly for Exercise and Sport, 78*, 225-235.
- Wilcox, S., & Trudel, P. (1998). Constructing the coaching principles and beliefs of a youth ice hockey coach. *Avante, 4*, 39-66.
- Wolohan, J. T., & Gray, G. R. (1998). Risk management behaviors in intercollegiate ice hockey. *Journal of Legal Aspects of Sport, 8*, 35-39.
- Young, B. W., & Salmela, J. H. (2002). Perceptions of training and deliberate practice of middle distance runners. *International Journal of Sport Psychology, 33*, 167-181.
- Zeng, Z. H., & Leung, R. W. (2008). An examination of instructional behaviors of collegiate athletic coaches in athletic practice and physical skill class settings. *Journal of International Association for Physical Education in Higher Education, 5*, 1-8.

Appendix A

Interview Guide

Introductory Comments

Introduce myself and the general purpose of the study
Confidentiality/Use of data and reasons for audio-taping and note-taking
Focus and direction of questions

“Thank you very much for participating. Today I’m going to ask you some questions about your coaching experience and in particular, your experiences coaching at the recreational and competitive level. If you have coached more than one recreational or competitive team, I ask that you please answer the following questions based on your experience coaching the recreational and competitive teams that were closest in age”

1. Coaching Philosophies

- a. Do you identify yourself as a competitive coach or a recreational coach?
A coach’s philosophy is often viewed as a key building block to successful coaching.
- b. How would you describe your philosophy of coaching synchronized swimming?
- c. Do you think your coaching philosophy changes based on the level of the athletes you are coaching?
- d. Do you take your philosophy into consideration when planning your recreational and competitive practices?
- e. Could you explain to me the process you go through when planning a recreational practice and a competitive practice?
- f. Successful coaches display many different types of coaching styles. Some are calm and laid back, while others get in your face and many range in between. How would you describe your coaching style?

2. Coaching Experiences

- g. How have your experiences as a coach been different when coaching a recreational team versus coaching a competitive team?
- h. Are there any additional challenges you face when planning for competitions?
What about watershows?
- i. Do you think that it’s easier to get to know your athletes on a more personal level in the recreational context or competitive context?
- j. How have these personal interactions shaped your coaching over the course of your career, if at all?

3. Goals, Expectancies, Values, and Beliefs

- k. Do you have different expectations of yourself when you are working with recreational athletes versus competitive athletes?
- l. How would you define success in a recreational context? What about in a competitive context?
- m. Another thing we are interested in understanding a little more about is your perspectives on the main goals of your synchro programs. Could you tell me a little about those in the context of recreational swimmer development versus competitive athlete development?

4. Coaching Behaviour

- a. Suppose I was observing one of your practices, what behaviours would I see that demonstrate your coaching style?
- b. Would these behaviours change if I was observing you with recreational swimmers versus competitive swimmers?
- c. In either of these contexts do you find yourself thinking about or being more aware of the behaviours you are displaying?
- d. What kind of skills are you trying to develop in your athletes? Do you think these relate back to your coaching philosophy, coaching style, behaviours, and goals?
- e. Do you find that the skills you are trying to foster and develop within your athletes change along with their level of performance?

Final Question and Concluding Comments

Finally, reflecting back on the answers you've given me, as well as your personal experiences, do you think there is a difference between a competitive coach and a recreational coach?

That covers everything I wanted to ask. Is there anything that we did not discuss that you feel is important to mention? Thank you very much for your time, it is greatly appreciated.

Appendix B

Recreational and Competitive Coach Behaviour Coding Manual

Recreational and Competitive Coach Behaviour (RCCB) Coding Manual

January 24, 2014

RCCB – Coding Crib Sheet

Subject (letters)

z – Coach

t – Team

a – Single Athlete

g – Small Group of Athletes

c – Other Coach

x – Other(s)

6.1

Coach Content (10's and 20's)

11 – Positive Reinforcement:

- Verbal (e.g., “good job”, “well done”, etc.)
- Non-verbal (e.g., thumbs up, high five, etc.)

12 – Encouragement:

- E.g., “you’ll do better next time”, “don’t worry about it”, “let’s go guys”, “you can do it”, etc.

13 – Corrective Technical Feedback:

- E.g., “pull your shoulders back and down”, “switch to split scull earlier”, “chin up”, etc.

14 – Technical Instruction:

- E.g., “I want to see tight patterns”, “focus on traveling in your propeller”, etc

15 – Informing:

E.g., answering question, explaining the reasoning behind a particular drill or activity, etc.

16 – Questioning:

- E.g., “can anyone show me a proper layout?”, “On what count do we straighten our arm?”

17 – Organization:

- E.g., “We’re doing ___ drill”, “go over there”, etc.

18 – Observation:

- Default code if coach is engaged in practice but criteria not met for any actively communicative code.

19 – General Communication:

- E.g., joking with athletes, talking about school, etc.

20 – Not Engaged:

- E.g., talking to other coaches (even if talking about practice-related content), adjusting music, etc.

21 – Keeping Control:

- E.g., “hurry up!”, “stop talking!”, etc.

22 – Error Technical:

- E.g., “you did ___ wrong”, “your leg was too low”, etc.

23 – Negative Evaluation:

- Verbal (e.g., “that was terrible”, sarcasm, etc.)
- Non-verbal (e.g., shaking head, etc.)
- Punishment or threat of punishment

Coach Actions (30's)

31 – Positive Modeling

- Physical demonstration of the correct way to perform a position, transition, or skill

32 – Negative Modeling

- Physical demonstration of the incorrect way to perform a position, transition, or skill

33 – Physical Guidance

- Coach physically guides the athlete through a position, transition, or skill

Context – Activity being performed by athlete(s)

w – Warm up:

- Athletes are swimming laps to prepare body for practice

d – Figure or Technical Drill:

- Athletes performing exercises to learn or improve a specific skill (figure) or technique

r – Routine:

- Athletes performing exercises to learn or improve their routine in part or in its entirety; can be done on land (landrill) or in the water

s – Stretching or Conditioning:

- Athletes are performing exercises to improve their strength, endurance, flexibility, co-ordination, etc. on land

o – Other:

- Athletes are taking a break from practice (i.e., water, bathroom, or snack breaks) or not engaged in group activity.

Notes

- 10 (UNCODABLE)

- 3-second rule for: 10, 18, 20

General Coding Guidelines

Overview

The Recreational and Competitive Coach Behaviour coding system was developed for observations of coaches working in a recreational and competitive team sport environment, specifically synchronized swimming. Thus, this coding manual contains features endemic to synchronized swimming (e.g., routine or figure context) that may not be generalizable to all sports. This coding manual is intended for observation of primarily in-pool practice time, not competitions.

The codes in the RCCB are based on behaviours across two (3) dimensions:

1. Coach content (the content of a given coach behaviour)
2. Recipient Subject (to whom a coded behaviour is directed)
3. Context (the context in which a given coach behaviour occurs, relative to the activity being performed by the athletes)

Rules

- 3-second rule
 - Wait three (3) seconds before coding ‘observation’ (coach content) when changing from any actively communicative code. Code for ‘observation’ only if it continues past the three (3) second waiting period. If within three (3) seconds a different actively communicative or visible behaviour occurs, do not wait to code that behaviour.
 - Wait three (3) seconds before coding ‘uncodable’ (coach content) when changing from any other code. Code for this behaviour only if it continues past the three (3) second waiting period. If within three (3) seconds a different behaviour visibly or audibly occurs, do not wait to code that behaviour.
 - Wait three (3) seconds before coding ‘not engaged’ (coach content) when changing from any actively communicative code. Code for this behaviour only if it continues past the three (3) second waiting period. If within three (3) seconds a different actively communicative or visible behaviour occurs, do not wait to code that behaviour.
- Default codes
 - For coach content dimensions, a specific behaviour code is to be coded by default if criteria for any other behaviour within the dimension are not met. That is, use the default codes in the absence of any other codable behaviour:
 - (coach content) – ‘observation’
 - No default categories exist for subject (recipient) or context dimensions as these must be directly observed.

Subject – Initiator or Recipient (letters)

As there are multiple participants in all videos (i.e., individual athletes and microphone-wearing coach), the coder must specify which subject is the recipient of the Coach (z) behaviour. For all recipient subject codes, code as ‘team’ unless the behaviour is directly targeted at a specific individual (i.e., if coach is talking to two or more athletes). The subject codes are as follows:

CODE

z – Coach

t – Team

a – Single Athlete

g – Small Group of Athletes

c – Other Coach

x – Other(s)

Coach Content (10’s and 20’s)

10 – Uncodable:

Notes

- To be coded if coach is out of view with no verbal communication detected or microphone cuts out.
- 3-second rule in effect before coding for ‘uncodable’.

POSITIVE CODES

11 – Positive Reinforcement: Positive reaction by coach to desirable performance by her athlete(s).

Notes

- Focus is on success.
- Verbal (e.g., “good job”, “well done”, etc.)
- Non-verbal (e.g., thumbs up, high five, etc.)
- If non-verbal, must be very obvious communication.

12 – Encouragement: Non-technical encouragement from coach to her athlete(s), must be coach-initiated.

Notes

- Non-verbal (e.g., clapping to encourage swimmers to go faster, etc.)
- If non-verbal, must be very obvious communication.
- E.g., “you’ll do better next time”, “don’t worry about it”, “let’s go girls”, “you can do it”, etc.

TECHNICAL CODES

13 – Corrective Technical Feedback: Corrective technical feedback from coach to her athlete(s).

Requires specific instruction regarding how the athlete can perform the skill correctly/fix a current mistake/avoid the mistake in the future.

Notes

- Code only if technical feedback given in response to current or previous athlete performance
- E.g., “pull your shoulders back and down”, “chin up”, etc.

14 – **Technical Instruction:** Technical and tactical feedback from coach, directed at athletes’ motor and/or psychological skill execution or performance.

Notes

- Code any performance cues or technique focus points given during explanation of a drill/activity as ‘technical instruction’
- Can include general psychological topics related to performance (e.g., confidence, focus, mental toughness, etc.) or specific strategies intended to improve the psychology of performance (e.g., imagery, self-talk, goal-setting, etc.)
- E.g., “I want to see tight patterns”, “focus on traveling in your propeller”, etc.

15 – **Informing:** Coach explains or reviews a skill, procedure, routine, or drill and/or is answering her athlete(s) question.

Notes

- Athletes may or may not be engaged in an activity during this time.
- Coach response may be an answer to questions posed by her athletes.
- Informing can take place if coach is elaborating on the reasoning behind a particular choice of skill, procedure, routine, or drill.
- E.g., “Yes, I want you to put your nose plug on”, “We keep our chin back in layout to appear long”, “We’re working on support scull because we will be learning bent knee soon”, etc.

16 – **Questioning:** Questions posed by the coach to her athlete(s) about a skill, procedure, routine, or drill with the intent of eliciting a verbal or non-verbal response.

Notes

- Athletes may or may not be engaged in an activity during this time.
- Coach may listen to her athlete(s)’s response to her questions and to their questions about execution of a skill, procedure, routine, or drill.
- E.g., “Can anyone show me a proper layout?”, “On what count do we straighten our arm?”, etc.

NEUTRAL CODES

17 – **Organization:** Communication from coach related to organization of practice tasks and athlete actions, NOT intended to directly influence performance.

Notes

- E.g., “now we’re doing ___ drill”, “go over there”, etc.
- Cannot include any technical instruction or encouragement. Code for each separately, even if they occur in sequence (e.g., “Set up for line drills now. Focus on your toe point. You can do it!” to be coded as ‘organization’, then ‘technical instruction’ (code 14), then ‘encouragement’ (code 12).
- If coach is verbally counting or keeping time/beat while athletes are engaged in a drill/activity, code as ‘organization’

18 – **Observation:** Coach engaged in observing/watching athletes during practice activities, though not directly communicating with athletes.

Notes

- Default code if coach is engaged in practice but criteria not met for any actively communicative code.
- 3-second rule in effect before coding for ‘observation’ from an actively communicative code.
- If coach is counting or keeping time/beat by tapping on poolside, etc. with an implement, NOT verbally counting or communicating, code as ‘observation’

19 – **General Communication:** Communication from coach unrelated to task or performance.

Notes

- E.g., joking with athletes, talking about school, etc.

20 – **Not Engaged:** Coach not engaged in practice activities directed at athletes and not directly communicating with athletes.

Notes

- E.g., talking to other coaches (even if talking about practice-related content), waiting by the sound system, listening to music while athletes warm-up, etc.

DISAPPROVAL CODES

21 – **Keeping Control:** Verbal reaction by coach intended to maintain order in response to athlete(s) inattentiveness, disruptive non-task related conduct, etc.

Notes

- E.g., “hurry up!”, “stop talking!”, etc.

22 – **Error Technical:** Technical negative reaction by coach to an undesirable performance by athlete(s) WITHOUT any corrective information; pointing out mistake.

Notes

- Code for ‘error technical’ and ‘technical feedback’ separately, even if they occur in sequence (e.g., “Your leg was too low. Push your hips up to get your leg higher.” to be coded as ‘error technical’ and then ‘corrective technical feedback’ (code13).
- E.g., “you did ___ wrong”, “your leg was too low”, etc.

23 – **Negative Evaluation:** Non-technical negative reaction by coach to an undesirable performance by athlete(s).

Notes

- Verbal (e.g., “that was terrible”, sarcasm, etc.)
- Threats of punishment or implementation of punishment
- Non-verbal (e.g., shaking head, etc.)
- If non-verbal, must be very obvious communication.

Coach Action Codes (30’s)

31 – **Positive Modeling:** The coach or athlete demonstrates nonverbally the correct way to perform a position, transition, routine, or drill.

Notes

- The emphasis of the demonstration must be on correct performance even if the demonstration is not done perfectly.
- The demonstration may take place on land (coach) or may be performed by a stand-in (i.e., a swimmer) if the coach is not in the pool.
- Code for ‘positive modeling’ and ‘negative modeling’ separately, even if they occur in sequence (e.g., “When you do a sailboat you want your toe to draw up the side of your leg like this. I don’t want to see anything like this.” To be coded as ‘positive modeling’ and then ‘negative modeling’.

32 – **Negative Modeling:** The coach or athlete demonstrates nonverbally the incorrect way to perform a position, transition, routine, or drill.

Notes

- The emphasis of the demonstration must be on incorrect performance even if the demonstration not done perfectly.
- The demonstration may take place on land (coach) or may be performed by a stand-in (i.e., a swimmer) if the coach is not in the pool.
- Code for ‘positive modeling’ and ‘negative modeling’ separately, even if they occur in sequence (e.g., “When you do a sailboat you want your toe to draw up the side of your leg like this. I don’t want to see anything like this.” To be coded as ‘positive modeling’ and then ‘negative modeling’.

33 – **Physical Guidance:** The coach physically guides her athlete(s) through a position, transition, routine, or drill.

Notes

- There must be physical contact between the coach and the swimmer
- If physical contact occurs in sequence with another coach content code, these must be coded separately. (E.g., A coach who is holding an athlete’s foot and twisting the leg during a Catalina rotation may ask “Do you feel a difference?” would be coded as ‘physical guidance’ and then ‘questioning’ (code 14).

Note - All coach content codes must be qualified by recipient subject code. Code all recipient subject codes as ‘team’ unless the behaviour is directly targeted at a specific individual (i.e., if coach is talking to one athlete, or a small group of athletes).

Context – Activity being performed by athletes

CODE

w – **Warm up:** Athletes are swimming laps to prepare body for practice.

Notes

- To code ‘warm up’, at least one swimmer must have started swimming laps.
- Code ‘warm up’ even if athletes are touching the side of the pool to receive instructions from coach or waiting for their turn in line.
- Code ‘warm up’ until the last swimmer has completed the set of laps.

d – **Figure or Technical Drill:** Athletes performing exercises to learn or improve a specific skill (figure) or technique.

Notes

- To code ‘figure or technical drill’, swimmers must be learning, developing, or perfecting a synchro-specific technique, skill, or figure.
- Code ‘figure or technical drill’ even if athletes are touching the side of the pool to receive instructions or feedback from coach.
- ‘Figure or technical drill’ may be coded on land or in the water, provided that on land activities are being used to teach, develop, or perfect a synchro-specific technique, skill, or figure.
- Code ‘figure of technical drill’ until the last swimmer has completed the drill or figure as instructed by coach.

r – **Routine:** Athletes performing exercises to learn or improve the routine.

Notes

- To code ‘routine’, it must be clear that the activity is being used to teach, develop, or perfect the athletes’ routine.
- Code ‘routine’ even if athletes are touching the side of the pool to receive instructions from coach.
- ‘Routine’ activities may take place on land (landrilling) or in the water (tapping, parts, or run-through)

s – **Stretching or Conditioning:** Athletes are performing exercises to improve their strength, endurance, flexibility, co-ordination, etc.

Notes

- To code ‘stretching or conditioning’, the activity must be taking part entirely out of the pool.
- Code ‘stretching or conditioning’ only if the activity taking place is meant to develop general sport skills (stretching, strength, flexibility, co-ordination, etc.) no synchro specific skills or techniques may be taught or developed.

o – **Other:** Athletes are taking a break from practice (i.e., water, bathroom, or snack breaks) or not engaged in group activity.

Notes

- To code ‘other’, athletes must not be taking part in a specific practice activity (i.e., water, bathroom, or snack break or free time)
- Code ‘other’ if athletes are not engaged in any activity.

Appendix C

Global Rating Scales

Observer impressions: Global ratings of the coach and practice environment

Coach Appearance:

1. The coach appears at ease	Not at all						Extremely
	1	2	3	4	5	6	7
2. The coach appears competent	Not at all						Extremely
	1	2	3	4	5	6	7
3. The coach appears controlling	Not at all						Extremely
	1	2	3	4	5	6	7
4. The coach appears organized	Not at all						Extremely
	1	2	3	4	5	6	7
5. The coach appears unprofessional	Not at all						Extremely
	1	2	3	4	5	6	7
6. The coach appears uninterested	Not at all						Extremely
	1	2	3	4	5	6	7
7. The coach appears enthusiastic	Not at all						Extremely
	1	2	3	4	5	6	7
8. The coach appears to distance herself from her athlete(s)	Not at all						Extremely
	1	2	3	4	5	6	7
9. The coach appears confused	Not at all						Extremely
	1	2	3	4	5	6	7
10. The coach appears to adopt a friendly stance	Not at all						Extremely
	1	2	3	4	5	6	7
11. The coach appears ill-prepared	Not at all						Extremely
	1	2	3	4	5	6	7
12. The coach appears tense	Not at all						Extremely
	1	2	3	4	5	6	7
13. The coach appears knowledgeable	Not at all						Extremely
	1	2	3	4	5	6	7
14. The coach appears professional	Not at all						Extremely
	1	2	3	4	5	6	7
15. The coach appears serious	Not at all						Extremely
	1	2	3	4	5	6	7
16. The coach appears distressed	Not at all						Extremely
	1	2	3	4	5	6	7
17. The coach appears attentive to her athlete(s)	Not at all						Extremely
	1	2	3	4	5	6	7

Overall Impression of Practice:

18. Overall, the practice appears to be organized	Not at all						Extremely
	1	2	3	4	5	6	7
19. Overall, the practice appears to be a positive learning experience	Not at all						Extremely
	1	2	3	4	5	6	7
20. Overall, the practice appears to be hard work	Not at all						Extremely
	1	2	3	4	5	6	7
21. Overall, the practice appears to be poorly planned	Not at all						Extremely
	1	2	3	4	5	6	7
22. Overall, the practice appears to promote individual development	Not at all						Extremely
	1	2	3	4	5	6	7
23. Overall, the practice appears to be fun	Not at all						Extremely
	1	2	3	4	5	6	7
24. Overall, the practice appears to be tailored to the athlete(s)' skill level	Not at all						Extremely
	1	2	3	4	5	6	7
25. Overall, the practice appears too challenging for the athlete(s)	Not at all						Extremely
	1	2	3	4	5	6	7
26. Overall, the practice appears to promote learning	Not at all						Extremely
	1	2	3	4	5	6	7
27. Overall, the practice appears to be chaotic	Not at all						Extremely
	1	2	3	4	5	6	7
28. Overall, the practice appears to promote teamwork	Not at all						Extremely
	1	2	3	4	5	6	7
29. Overall, the practice appears to be boring	Not at all						Extremely
	1	2	3	4	5	6	7
30. Overall, the practice appears to be enjoyable	Not at all						Extremely
	1	2	3	4	5	6	7

Appendix D

Letter of Information



School of Kinesiology and Health Studies
QUEEN'S UNIVERSITY
28 Division St.
Kingston, Ontario, Canada K7L 3N6
PHONE (613) 533-6000 x79049
FAX (613-533-2009)

LETTER OF INFORMATION - *Examining Youth Development in Sport*

I am contacting you to inform you about a research study that will be carried out by myself and a team of sport psychology researchers from Queen's University. All studies have been approved by the Queen's University Research Ethics Board.

Who we are and what we do:

Our sport psychology research lab consists of a team of graduate students working under the supervision of Dr. Jean Côté (Professor and Director of the School of Kinesiology and Health Studies at Queen's University). The focus of my research is on coach behaviour and how it influences athletic and personal development of youth athletes. Youth sport has the potential to promote a number of important developmental outcomes in young athletes' including increased performance, continued physical activity participation, and personal development. In examining youth development in sport, our primary research inquiries focus on: (1) coaches' interactions with athletes and (2) environmental features of youth sport (e.g., types of practice activities, participation pathways through age and competitive levels, etc.) Our goal is to generate information that can be used by coaches, parents, sport programmers, and sport policy makers to maximize the quality and productivity of youth's experiences in sport.

My Research Project:

I am currently conducting a study for my Masters thesis with the help of synchronized swimming organizations across Ontario. Specifically, I'm hoping to partner with your synchronized swimming club.

To collect my data, I will videotape 6 training sessions with the coach wearing a wireless microphone in order to analyze coach behaviour. Although the camera will be focused as much as possible on the coach, some athletes may feature in the video as well. Further, I will conduct interviews with some coaches asking them to reflect on their experiences.

We have previously used these data collection methods with several local sport organizations around eastern and southern Ontario and have encountered no issues or complaints from the organizations, participants, or parents involved. However, you may choose not to participate or rescind your consent to participate in this study at any point without fault or penalty.

Benefits for the sport club:

I will provide the club with a summary of the results and conclusions from my research project. I can also provide coaches with copies of the video footage of their teams. Further, though all individual results are kept strictly confidential and anonymous, I can provide each team or group with their own unique profile for feedback purposes.

Thank you so much for your time and please feel free to contact me with any questions you may have regarding this research study.

Renée Matte
MSc. Candidate
School of Kinesiology and Health Studies
Queen's University
Kingston, Ontario

Appendix E

Consent Forms



School of Kinesiology and Health Studies
QUEEN'S UNIVERSITY
28 Division St.
Kingston, Ontario, Canada K7L 3N6
PHONE (613) 533-6000 x79049
FAX (613)

PARTICIPANT CONSENT FORM – COACH

Title of the study: Examining Youth Development in Sport

The purpose of this study is to examine how different coach behaviours affect youth's development in sport. Specifically, an interview will be conducted to understand how coaches who have experience working with recreational and competitive athletes perceive these environments and their behaviours within them. Additionally, certain coaches will be observed at practice with their recreational and competitive teams to investigate how behaviour may change from one environment to the other. This study has been granted clearance according to the recommended principles of Canadian ethics guidelines, and Queen's policies.

This is part of a research study for which Jean Côté is the primary researcher. Information collected from coaches will remain completely confidential. For the entire study, all information collected will be kept in a locked filing cabinet by the primary researcher. Items will be available to the primary researcher and his research team. As a reminder your participation in this study is completely voluntary and you can decide to stop participating at any point without explanation or consequences. Should you decide to withdraw from participation, information collected to that point will be destroyed. Although there is no financial compensation it is anticipated that your information will help us to better understand the positive developmental experiences of youth sport participation.

All participants' individual responses will never be known, keeping individuals identity secure. While the information collected may be presented at academic conferences and published in relevant academic journals, anonymity and confidentiality of all participants will be maintained.

Any questions about study participation may be directed to Dr. Jean Côté at 613-533-6000 x79049. Any ethical concerns about the study may be directed to the Chair of the General Research Ethics Board at chair.GREB@queensu.ca or 613-533-6081.

Jean Côté, PhD
Primary Investigator
Director and Professor
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PARTICIPANT CONSENT FORM – COACH

I have read the information letter and understand that this study requires that I give an interview about my experiences as a synchronized swimming coach. I also understand that the second part of this study involves the videotaping of multiple practices in order to examine interactions between coaches and athletes, and that I may be asked to participate in this second phase.

I have been informed that my confidentiality will be protected throughout the study, and that the information I provide will be available only to the primary researcher and his research team. While the results of this study may be presented at academic conferences and/or in academic journals, I am aware that any results will be presented for the group only (i.e., no individual data will ever be reported) – thereby maintaining my anonymity.

Similarly, the videotaped practices will only be viewed by the primary researcher and/or his research team and only for the purpose of data analysis – they will never be shown at conferences or in any other presentation.

I understand that my participation in this research project is completely voluntary and that I reserve the right not to answer question(s) during the interview. I also recognize that I may stop participating at any time without explanation or consequence. I understand that any data collected up to that point will be destroyed.

Finally, any questions I have about this research project and my participation have been answered to my satisfaction. I understand that I am invited to contact the primary researcher and/or the General Ethics Review Board should any further questions or concerns about this research project or my participation.

I consent to participate in this research project.

Name of Participant

Signature

Date



School of Kinesiology and Health Studies

QUEEN'S UNIVERSITY

28 Division St.

Kingston, Ontario, Canada K7L 3N6

PHONE (613)533-6000 x79049

PARTICIPANT CONSENT FORM – PARENTS AND ATHLETES

Title of the study: Examining Youth Development in Sport

We would like to ask for your daughter's assistance with a study being carried out by researchers at Queen's University. The purpose of this study is to examine coach behaviour in recreational and competitive youth sport settings.

This study has been granted clearance according to the recommended principles of Canadian ethics guidelines, and Queen's policies and will involve teams being observed three times over the course of their season. The video camera will be trained on the coach at all times, however given the nature of coach-athlete interactions that occur during practice your daughter may be videotaped.

This is part of a research project for which Jean Côté is the primary researcher. The results from this study will be published and presented at conferences; however, the identity of your daughter and her synchronized swimming club will be kept confidential.

All the information provided through the observations will be stored in a locked office at Queen's University for a minimum of seven years after the completion of the study. Participation is voluntary and should you (or your daughter) wish, she may withdraw from the study at any time for any reason, without explanation or consequences. Any information collected up to the time of withdrawal will be destroyed.

If you and your daughter decide that she would like to be a part of this study, please complete the attached form. Any questions about the study may be directed to Dr. Jean Côté at 613-533-6000 x79049. Any ethical concerns may be directed to the Chair of the General Research Ethics Board at chair.GREB@queensu.ca or 613-533-6081.

Jean Côté, PhD
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PARTICIPANT CONSENT FORM – PARENTS AND ATHLETES

I have read and understood the purpose of this study and my daughter's involvement in this study. I am aware that my daughter will remain anonymous throughout the study and in any written results of the data collection through participation in this project.

I understand that my daughter's participation in this research project is completely voluntary and that she has the right to withdraw from the study at any time without penalty and that any data collected to this point will be destroyed.

Finally, any questions I have about this research project and my daughter's participation have been answered to my satisfaction. I understand that I am invited to contact the primary researcher and/or the General Ethics Review Board should I have any further questions or concerns about this research project and my daughter's participation.

I, _____ give permission to allow _____
to participate in the study conducted by the School of Kinesiology and Health
Studies at Queen's University.

Signature _____ Date _____

Please indicate if you wish to receive a summary of the study findings: [] Yes [] No

PARTICIPANT CONSENT FORM-ATHLETE

You are invited to participate in a study entitled 'Examining Youth Development in Sport'. Please read this form carefully and feel free to ask any questions you may have.

Purpose and Procedures

The purpose of this study is to examine the personal development of youth in sport. If you participate in this study you may also be videotaped during three of your practices.

Potential Benefits

As a participant, you may be making important contributions to the research literature. We cannot and do not guarantee or promise that you will receive any direct benefits from the study.

Storage of Data

The videotaped observations will be securely stored in a locked filing cabinet at Queen's University for a minimum of seven years as per University requirements.

Confidentiality

The data from this study will be published and presented at conferences; however, your identity will be kept confidential.

Right to Withdraw

You may withdraw from the study for any reason, at any time, without penalty of any sort. There will be no team related effects associated with withdrawal. Any information collected up to the time you withdraw from the study will be destroyed.

Questions

This study has been granted clearance according to the recommended principles of Canadian Ethics Guidelines, and Queen's policies. Any questions about study participation may be directed to Dr. Jean Côté at 613-533-6000 x79049. Any ethical concerns about the study may be directed to the Chair of the General Research Ethics Board at chair.GREB@queensu.ca or 613-533-6081.

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Consent to Participate

I have read and understood the description provided above. I have been provided with an opportunity to ask questions and my questions have been answered satisfactorily. I consent to participate in the study described above, understanding that I may withdraw this consent at any time. A copy of this consent form may be given to me for my records if I ask.

Signature of Participant

Date

Signature of Researcher

Date