Coaching and Cohesion in University Coacting Sports

By

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Abstract

Cohesion has been cited as a crucial component contributing to increased levels of enjoyment, adherence, and in most cases, performance in intercollegiate sport (Carron, Coleman, Wheeler, & Stevens, 2002). Coaches are believed to play an instrumental role in the development and maintenance of cohesion due to their organizational skills in creating a stable and positive environment for cohesion to develop within their teams (Bloom, Stevens, & Wickwire, 2003). To date, the majority of cohesion research has focused on interacting sports (i.e., hockey, basketball) and has overlooked coacting sports (i.e., cross-country running, swimming). Similarly, media attention and fan support has been predominantly directed towards interacting sports, despite 40% of intercollegiate sports being classified as coacting. Therefore, the purpose of this study was to identify and explain elite coaches' perspectives of cohesion in coacting sports such as cross-country running. A case study design was used to interview six Canadian university cross-country running coaches using a semi-structured open-ended interview format. Côté, Salmela, and Russell's (1995) guidelines were used to inductively analyze and interpret the data. Results revealed three higher-order categories, which were called *coach personality and experiences, athlete personality and characteristics,* and *team development.* Despite the idiosyncratic nature of the coaches' career progression, several common themes emerged, including the different ways coaches acquired knowledge, interpersonal characteristics that shaped their career, adapting to athletes with different characteristics, and general thoughts and beliefs regarding the development and maintenance of cohesion. More precisely, the majority of coaches appear to believe that cohesion played a role in athlete satisfaction and enjoyment.. This, in turn, may have influenced performance outcomes such as overcoming intrateam competition and rivalry, and enhancing teamwork during competition. Furthermore, a number of strategies were utilized throughout the season to enhance cohesion such as structured and unstructured team building exercises, setting and monitoring team goals, and planning social events. Overall, these findings have provided a greater understanding of the influence of coaching on cohesion while also expanding the body of literature on coacting sports.

Résumé

La cohésion est reconnue comme étant une composante importante qui contribue au niveau de satisfaction, à l'adhésion, et souvent, à la performance au sein des sports universitaires (Carron, Coleman, Wheeler, & Stevens, 2002). Grâce à leurs habiletés organisationnelles, les entraîneurs jouent un rôle critique dans le développement et la maintenance de la cohésion en créant un environnement stable et positif qui favorise le développement de la cohésion au sein des équipes (Bloom, Stevens, & Wickwire, 2003). La majorité des recherches existantes sur la cohésion concernent les sports interactifs (ex. : hockey, ballon-panier) sans examiner les sports co-actifs (ex. : courses cross-country, natation). Dans le même ordre, l'attention des médias et l'appui des amateurs de sports ont été principalement dirigés vers les sports interactifs, en dépit du fait que 40% des sports universitaires soient de type co-actifs. Cette étude visait à identifier et à expliquer les perspectives des entraîneurs d'élite à l'égard de la cohésion dans les sports co-actifs, tels que la course cross-country. Une méthodologie d'étude de cas a été utilisée dans un format d'entrevues semi-structurées et ouvertes auprès de six entraîneurs universitaires canadiens en course cross-country. La démarche de Côté, Salmela, et Russell (1995) a été sollicitée afin d'analyser et d'interpréter les données de façon inductive. Les résultats révèlent trois catégories à ordre élevé : *personnalité et expériences de l'entraîneur, personnalité et caractéristiques de l'athlète,* et *développement de l'équipe.* Malgré la nature idiosyncrasique de l'avancement professionnel des entraîneurs, plusieurs thèmes communs émergent comprenant les différentes façons avec lesquelles les entraîneurs acquièrent leurs connaissances, les caractéristiques interpersonnelles qui ont formé leur carrière, l'adaptation aux différents athlètes et les idées et croyances générales à l'égard du développement et la maintenance de la cohésion. Selon les entraîneurs, la cohésion avait joué un rôle déterminant dans le développement des réussites et de la satisfaction de l'équipe, notamment en surmontant des obstacles, telles que la compétition et la rivalité au sein de l'équipe. Afin d'améliorer la cohésion pendant la saison sportive, plusieurs stratégies ont été privilégiées : les exercices structurés et non structurés de formation d'équipe, l'établissement et le suivi d'objectifs et la planification d'événements sociaux. Globalement, ces résultats nous permettent de mieux comprendre l'influence de l'entraînement sur la cohésion et ajoutent aux connaissances actuelles sur les sports co-actifs.

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CHAPTER 1

Introduction

According to its website (www.universitysport.ca), an estimated 550 coaches and 11,000 athletes, including 13 sports (24 total teams)[1] from 52 recognized Canadian institutions are currently members of Canadian Interuniversity Sport (CIS). While intercollegiate sports across North America attract considerable media coverage and fan support, it has primarily focused on high profile *interacting* sports, meaning teammates train alongside one another while working towards team success in competitive situations (e.g., football, hockey, basketball). However, approximately 40% of all CIS sports are characterized as *coacting*. Here teammates also train together, yet independently and simultaneously compete against one another in competitive situations (e.g., track and field, cross-country running, swimming) (Carron, Hausenblas, & Eys, 2005). In other words, coacting athletes not only compete against other schools but also against members of their own team/school. Furthermore, coacting team outcomes are determined by combining each individual performance for an overall team total, while interacting teams combine each player's diverse skills in an *interdependent* pattern of teamwork to achieve team success (Carron et al., 2005). Finally, coacting teams are typically larger in size compared to interacting teams. For example, track and field teams have over 50 athletes while swim, cross-country running, and wrestling teams generally carry 25 members, whereas some interacting teams carry as little as 14 athletes (volleyball and basketball).

The majority of research on coacting sport teams has focused on predicting and evaluating cohesion in comparison with interacting teams, beginning with a series of

[1] Canadian Interuniversity Sport includes the following sanctioned interacting sports: basketball, curling, field hockey, football, ice hockey, rugby, soccer, and volleyball; and the following coacting

investigations from the University of Illinois (e.g., Fiedler, 1967; Landers & Lüschen, 1974; McGrath, 1962; Myers, 1962). In general, the results indicated that higher levels of cohesion led to negative performances (e.g., less task success) in coacting sports due to factors such as lower task orientation resulting in greater interpersonal attraction between members. However, subsequent investigations (e.g., Carron & Chelladurai, 1981; Carron, Coleman, Wheeler, & Stevens, 2002; Widmeyer & Williams, 1991) revealed that while cohesion did not contribute as much in coacting teams as it did in interacting teams, it remained positively correlated with performance and overall satisfaction of athletes. Carron and colleagues further revealed that the overall level of cohesion in coacting sports was ultimately lower than interacting sports. An important conclusion from these studies was the relationship between cohesion and performance could not be generalized across all sports due to several differences in team composition and athlete characteristics.

More recent research has investigated personality differences among coacting and interacting sport athletes (e.g., Colley, Roberts, & Chipps, 1985; Eagleton, McKelvie, & De Man, 2007; O'Sullivan, Zukerman, Kraft, 1998). Specifically, these studies have found significant differences in personality characteristics of interacting sport athletes compared to coacting sport athletes. More specifically, these results suggested that coacting sport athletes were more independent, less group oriented, and less likely to seek friendships from teammates in comparison to interacting athletes. Given these personality differences, it is conceivable that coaches may engage in different coaching behaviours when dealing with coacting athletes compared to interacting athletes.

The last few decades, has seen a significant increase in research in the field of coaching science (Bloom, 2002; Gilbert & Trudel, 2004; Rangeon, Gilbert, Bruner, & Côté, 2009). Coaches take on multiple roles such as teacher, mentor, and character builder (Gould, 1987), yet they also play an important role in the development of task and social cohesion (Bloom, Stevens, & Wickwire, 2003; Murray, 2006; Newin, Bloom, & Loughead, 2008; Ryska & Cooley, 1999; Turman, 2003; Westre & Weiss, 1991; Yukelson, 1997). For example, Bloom and colleagues found that coaches used strong organizational skills to create a cohesive environment. Furthermore, Murray revealed that coaches who demonstrated leadership behaviours such as positive feedback and social support had teams that were more task and socially cohesive. Taken together, it is conceivable that if cohesion develops within a team, it begins with the behaviours of the coach.

Two theories were used as frameworks in this study. Côté, Salmela, Trudel, Baria, and Russell's (1995) Coaching Model (CM) describes coaching knowledge and behaviours. The CM explains how coacting coaches structure their knowledge in the development of team cohesion by focusing on a series of primary (*organization, training,* and *competition*) and peripheral (*athlete's characteristics, coach's characteristics,* and *contextual factors*) components influencing athlete development. The CM uses primary and peripheral components to help coaches establish guidelines to create optimal conditions for athlete development.

Carron, Widmeyer, and Brawley's (1985) conceptual model for cohesion proposes that cohesion is multidimensional, meaning members integrate information from diverse aspects of the social world relevant to the group. Conceptually, the model

has four related dimensions: *group integration-task, group integration-social, individual attraction to the group-task,* and *individual attraction to the group-social.* Each dimension is believed to act together in creating a sense of cohesiveness among the group and its individual members. In sum, the CM provided a framework for establishing knowledge on the development of athletes and the team. The conceptual model for cohesion addressed the development of the different dimensions of cohesion.

Purpose of the Study

The purpose of this research study was to explore the experiences of elite cross-country running coaches as it related to cohesion. In particular, this study examined various components of Côté, Salmela, Trudel, et al.'s (1995) CM and Carron and colleagues' (1985) conceptual model for cohesion to guide the following central research question: What are coach's experiences and knowledge of cohesion with cross-country running athletes and teams?

Significance of the Study

Previous research has demonstrated the importance of coaches in the development of cohesion in sport (e.g., Bloom, et al., 2003; Murray, 2006; Ryska & Cooley, 1999; Turman, 1999). However, the majority of these studies primarily involved coaches of interacting sport teams (e.g., Carron et al., 2002; Murray, 2006; Widmeyer & Williams, 1991). Thus, gathering the knowledge and experience of expert cross-country running coaches helped current researchers further understand how coaching relates to the development of cohesion in different contexts such as coacting sports. Furthermore, identifying the coaching behaviours that influenced cohesion in such an environment provided cross-country coaches with valuable practical information. Specifically, the

results provided a blueprint for many aspiring cross-country running coaches by providing them with a deeper understanding of how coacting teams function. Finally, the current study expanded the overall body of literature on elite coaches of coacting teams as they have often been overlooked in empirical research.

Delimitations

For the purpose of this study, the following delimitations were identified:

1. Participants had a minimum of 10 years coaching experience at the CIS level or higher.
2. All participants had a minimum Level 3 in the old NCCP program and/or a competition stream (e.g., high performance) certification in the new NCCP coaching certification program for the Coaching Association of Canada (CAC)
3. Participants were the head coach of a CIS cross-country running team.
4. Participants coached both the male and female cross-country running team.
5. Participants were male.
6. The interviews focused solely on the coaches' perceptions.

Limitations

These delimitations led to the following limitations:

1. Results were only indicative of CIS coaching experiences.
2. Since the study investigated only male coaches' perceptions, the results were only be relevant to that specific sex.
3. The results may have only had implications within the sport of cross-country running.

4. The results are based on coaches' individual memories and it is therefore possible that certain pieces of information were overlooked or misremembered during the interviews.

Operational Definitions

Canadian Interuniversity Sport (CIS): The national governing body and league of university sport in Canada. Some athletes go on to international and professional competition. All athletes are also students at the university at which they compete. There are 52 schools that are currently members of CIS, including approximately 550 coaches and 11,000 athletes in 12 different sports (Canadian Interuniversity Sport, 2010).

Coacting Sport: A sport where teammates independently perform the same task in competition with one another, and team success is determined by the sum of individual performance of some or all team members (Widmeyer & Williams, 1991). Examples of coacting sports include cross-country running, track and field, swimming, and wrestling.

Interacting Sport: A sport where teammates combine their diverse skills in an interdependent pattern of teamwork (Carron et al., 2005). Examples of interacting sports include hockey, basketball, soccer, and football.

Cohesion: Cohesion has been defined as "a dynamic process that is reflected in the tendency for a group to stick together and remain united in the pursuit of its instrumental objectives and/or for the satisfaction of member active needs" (Carron, Brawley, & Widmeyer, 1998, p.213). Included in its conceptualization, are the dimensions of social and task cohesion, representing social desirability of remaining in the group and the role of the group in achieving performance goals respectively.

Task Cohesion: The general orientation toward achieving the group's goals and objectives.

Social Cohesion: The general orientation toward developing and maintaining social relationships within the group.

Expert Coach: In this study, expert performance coaches were identified following the guidelines of Côté, Young, North, and Duffy (2007). Specifically, coaches must have a prolonged commitment to the program, employ structured and rigorous training, and the objective to prepare athletes to perform in competition. Furthermore, for this study, coaches must have a minimum ten years of coaching experience at the CIS level or higher and be recognized as one of the best in their field by a group of experts.

CHAPTER 2

Literature Review

This chapter will be comprised of two main sections. The first section will explain group dynamics, including Carron, Widmeyer, and Brawley's (1985) conceptual model for cohesion. This section will also examine the definition of a group, explain research on cohesion in groups, as well as review research relating to coacting sport groups. The second section will examine empirical literature focusing on coaching science, including Gilbert and Trudel's (2004) analysis of coaching literature followed by Côté, Salmela, Trudel, Baria, and Russell's (1995) Coaching Model (CM), including both primary and peripheral components of this model.

The Nature of Groups

Group membership and involvement is an important and common characteristic of our society (Carron, Hausenblas, & Eys, 2005). For example, people attend school in groups based on age, socialize in groups based on interests, and work in groups based on their professions. They also play, exercise, and participate in sport within groups, including so-called individual sports like tennis, boxing, and track and field. Group involvement influences the psychosocial behaviours and attitudes of each individual (Carron & Hausenblas, 1998), including self-esteem (Brown & Lohr, 1987), social support (Adams, King, & King, 1996), and feelings of belonging and acceptance (Baumeister & Leary, 1995). Groups are not limited to any particular social situation. In fact they may vary in importance and degree in which they impact individuals' lives. Groups have adopted several definitions over the years due to their multidimensional

nature (Carron et al., 2005). Thus, defining this term will help understand its significance to behaviours in sport settings.

Definition of Groups

Theorists have historically failed to agree on a concrete definition of a group due to its complex nature (Carron et al., 2005; McGrath, 1984). However, academics have generally agreed on several elements important to its meaning. Most fundamental to this interpretation was the notion that groups are more than a collection of any two or more people (McGrath, 1984). For example, individuals attending the same event are not considered members of the same group, although groups may eventually develop within these settings. Furthermore, Sherif and Sherif (1956) emphasized that a group exists where members form "a social unit which consists of a number of individuals who stand in *(more or less)* definite status and role relationships to one another and which possess a set of values or norms of its own regulating the behaviours of individual members, at least in matters of consequence to the group" (p. 144). In sum, the definitions of a group reinforce that many factors must be taken into consideration such as social aspect, size, or environment in which the group exists (Carron et al., 2005).

Researchers have also differed on the optimal size of a group. For example, Hare (1981) reviewed group research between 1898 and 1974 and concluded that the optimal size for any group, whether working, social, or family was five. On the other hand, Steiner (1972) felt that optimal group size varied with the situation, such as the purpose of the group. Finally, Sheppard (1964) defined groups as two or more people interacting with one another. Sheppard also noted that groups of two or three individuals maintained certain characteristics that were liable to disappear in groups with four or more

individuals. The general conclusion has been that groups have occurred in all numbers and the optimal number for any given group was dependent on the specific objectives and structure of the groups.

Therefore, when describing a sport team, we can conclude that it is defined as a collection of two or more people possessing a common identity, goal, objective, and fate (Carron et al., 2005). Sport groups may take the shape of several different configurations depending on the size and competition. A very specific objective of every sport team, winning, serves to ensure that there is at least one shared common purpose in a sport team. However, in the case of a coacting sport team, each member shares this common purpose in addition to their own goal of individual success. Thus, it is important to fully understand the concept of this type of sport team.

Coacting Sport Groups

A variety of classifications exist in competitive sport. Some involve more team members, higher coordination, and greater interaction than others. Simply put, no two sports are exactly alike. Each sport is unique and has the potential to be independently influenced by factors such as cohesion (Carron et al., 2005) and coach behaviours (Smith & Smoll, 1990). According to Carron and colleagues, success in interacting sports (e.g., hockey, basketball) depends upon appropriately combining each player's diverse skills in an interdependent pattern of teamwork. In coacting sports (e.g., track and field, cross-country running, swimming), teammates independently perform the same task in competition with one another, and team success is determined by the sum of individual performance of some or all team members. In competitive coacting situations, the gains by one team member reduce the potential gains by another member. Here, rewards are

provided on the basis of each individual's relative contribution to success (Carron et al., 2005). Consequently, rewards are shared unequally among members of the team and can in turn influence the sense of "togetherness" or social cohesion within a team (Widmeyer & Williams, 1991).

The study of team cohesiveness in sport and other areas of psychology began with Festinger, Schachter, and Beck's (1963) contention that cohesiveness reflected the sum of all forces that influenced a group to remain together. Following this, factors such as interpersonal attraction (Nixon, 1976), pursuit of shared goals (Carron, Widmeyer, & Brawley, 1985), and intragroup interactions (Petersen, Dietz, & Frey, 2004) have been identified as antecedents to group unity. A common belief among sport practitioners for many years was the existence of a positive relationship between cohesion and performance; that is, group cohesion was said to positively influence athletic performance in any sport setting (e.g., Berkowitz, 1956; Carron & Chelladurai, 1981). Landers and Lüschen (1974) gained recognition through their persistent questioning and thorough examinations of popular beliefs of "truths" and "myths" in this field, by testing the possibility that the relationship between cohesion and performance could not be generalized across all sports. Based on their findings, the authors characterized the nature of interactions among group members along a continuum, from coaction to interaction (Landers & Lüschen, 1974). Some of the earliest research, for example the Myers (1962) study of rifle teams and the Landers and Lüschen study with intramural bowling teams, investigated the performance outcome and cohesiveness of competitive coacting sport teams. More specifically, these studies produced results suggesting a negative relationship between cohesion and performance. It was later indicated that cohesion did

not contribute as much to the performance of coacting teams (Colley, Roberts, & Chipps, 1985; Widmeyer & Williams, 1991) as it had to interacting teams (Carron et al., 2002). However, cohesion was positively correlated to coacting teams performances (Widmeyer & Williams, 1991).

It is unclear whether a coactor (i.e., intrateam competitor) serves as a positive or negative motivator on performance. Competitiveness has historically been studied as both a personality variable and as a temporary psychological state triggered by the demands of certain situations (e.g., presence of competitor) (Sambolec, Kerr, & Messé, 2007). Studies have maintained that performing a task in the presence of another individual resulted in rivalry and competition, which served as a motivating force for better individual performance and outperforming others, even in the absence of actual competition (Fiedler, 1967; Sambolec et al., 2007). Sambolec and colleagues compared performances on a physical persistence task in the presence and absence of a confederate participant. Results indicated that individuals performed better in the presence of the confederate as opposed to alone. The authors attributed the increase in performance to motivation based on a fear of being outperformed even though the confederate was not an actual competitor. Moreover, research in organizational behaviour has suggested that certain task leaders promoted intrateam competition for organizational rewards, status, and even membership preservation in order to enhance productivity and motivate greater performance (Churchill, Ford, & Walker, 1997).

From a slightly different perspective, Golding and Ungerleider's (1991) examination of elite track and field athletes emphasized that the social support and encouragement an athlete received from teammates contributed to the motivation

necessary for rigorous training and ultimately better performances. Furthermore, Hertel, Kerr, and Messé (2000) placed dyads in a conjunctive weight lifting task where the team's score was somewhat dependent on the capabilities of the least skilled team member. Results demonstrated that when an individual was placed in such a situation and believed that he/she was the least capable group member (e.g., slowest runner on the team), he/she often improved in relation to previous performances, demonstrating a group motivation gain. Regardless of the rationale, these studies have challenged the early conclusions (e.g., Bird, 1977; Landers & Lüschen, 1976; Myers, 1962) that cohesion and success for coacting teams were negatively related.

Identifying cohesion as a correlate of performance and member satisfaction in coacting sports (e.g., Widmeyer & Williams, 1991) has led researchers to identify athlete characteristics associated with its development. A number of studies concerning the psychological attributes of sport participants have found significant differences of interacting and coacting sport athletes (e.g., Colley et al., 1985; Eagleton, McKelvie, & De Man, 2007; O'Sullivan, Zukerman, & Kraft, 1998). For example, Eagleton and colleagues found that interacting sport participants scored higher on measures of extraversion and lower on measures of neuroticism than coacting sport participants. Eagleton and colleagues concluded that these results paralleled the conventional hypothesis that coacting sport participants appeared more independent, less group-oriented, and actively sought out sports that did not necessarily demand high levels of cohesion. In other words, extraverts were more likely to positively impact group tasks and exhibit leader behaviours (Thoms, Moore, & Scott, 1996). Thus, it is important to understand the many factors that distinguish coacting from interacting sport athletes.

Overall, studies examining interacting and coacting groups have identified significant differences in athlete's personality, competitiveness, group behaviour, and cohesion. It is apparent that the type of sport in which athletes participate will mediate such behaviours. Therefore, it is important to fully understand the concept of friendship and the bond teammates have with one another due to the importance of individual relationship within a team as this may further influence performance.

Cohesion (in Groups)

Cohesion reflects the strength of the social and task-related bonds among members of a group (Carron, 1998). Cohesion has been defined as "a dynamic process which is reflected in the tendency for a group to stick together and remain united in the pursuit or its instrumental objectives and/or for the satisfaction of member affective needs" (Carron, Brawley, & Widmeyer, 1998, p. 213). It has been proposed that "there is no such thing as a non-cohesive group… if a group exists, it is to some extent cohesive" (Donnelly, Carron, & Chelladurai, 1978, p. 7), although, different groups will vary in their level of cohesiveness. The role of group cohesion has been cited as a crucial component for success in many different settings including counseling psychology (Marziali, Munroe-Blum, & McCleary, 1997), organizational psychology (Greene, 1989), and even military psychology (Mael & Alderks, 1993). Early viewpoints on cohesion by Gross and Martin (1952) emphasized cohesion as the resistance of the group to potential disruptive forces. Similarly, Festinger and colleagues (1963) defined cohesion as the force *causing* members to remain in groups. Collectively, these perspectives have suggested that the cohesiveness that binds the groups into an entity also has the ability to resist all the pressures that can potentially tear it apart.

The cohesion-performance relationship is one that has gained much attention in several different fields of research including industrial, sport, military, and social psychology (Mullen & Cooper, 1994). Historically, summaries of research have been unable to establish a clear relationship between team cohesion and performance in the sport setting. For example, early work by Martens and Peterson (1971) concluded that the findings relevant to this relationship were contradictory. A decade later, Carron (1980) revealed inconsistencies on the examined effect of cohesion on performance in sport. In an attempt to clarify this relationship, Mullen and Cooper carried out a comprehensive cohesion-performance meta-analysis on 49 studies from several different branches of psychology. An important conclusion was that the overall cohesion-performance illustrated a positive, albeit weak, relationship. Although Mullen and Cooper were able to provide useful insights on this relationship, Carron and colleagues (2002) argued its applicability to sports were questionable due to their insufficient use of sport related studies and exclusion of unpublished studies (theses, dissertations).

In an attempt to remedy this problem, Carron and colleagues (2002) conducted a meta-analytic summary on the cohesion-performance relationship in sport settings alone. Results from 46 sport-specific articles identified a significant moderate to large relationship between cohesion and performance (Carron et al., 2002). In addition, Carron and colleagues examined a number of moderating variables including sport type. It was revealed that sport type was not a moderator for the cohesion-performance relationship. In other words, better performance was related to more cohesiveness in both coacting and interacting sports. Even though results of the meta-analysis revealed a positive cohesion-performance relationship in coacting sports, further investigation revealed that the

absolute level of cohesion in coacting sports was ultimately lower than interacting sports (Carron et al., 2002). Overall, the results of both meta-analyses provided evidence of a positive relationship between cohesion and performance in sport. Perhaps an important component to consider is the strategies used to develop cohesion in sport teams.

Some researchers have suggested that team-building interventions are the most common strategy for achieving high levels of cohesion among sport and exercise groups (e.g., Bloom, Stevens, & Wickwire, 2003; Gould, Guinan, Greenleaf, Medbery, & Peterson 1999; Voight & Callaghan, 2001). For example, Bloom and colleagues described how expert university coaches implemented team-building activities to increase cohesion. More specifically, these activities were divided into three dimensions: social (e.g., movie night, team dinners), psychological (e.g., discussing variables important to team success), and physical (e.g., 10k runs, team workouts). In a related study, Newin, Bloom, and Loughead (2008) examined coaches' perceptions of team-building interventions in youth sport. These interventions also produced several peripheral outcomes in addition to increasing unity among team members, including problem-solving skills, ability to focus, and intrateam communication. Furthermore, Senécal, Loughead, and Bloom (2008) found that implementing team building activities through goal-setting increased perceptions of cohesion. This suggests ways in which coaches impact the development of cohesion. Specifically, how coaches structure their season by incorporating cohesion-building activities into their seasonal plan.

Understanding the cohesiveness of a group requires understanding the nature that draws members to the group. For example, social groups, military units, fraternities, and sport teams all have different goals. Yet, the members of these groups stick together

because they hold a common fundamental purpose (group goals) (Carron et al., 2005; Carron, et al., 1998; Festinger et al., 1963). One characteristic of cohesion in sports is that is it multidimensional (Carless & De Paola, 2000; Carron & Hausenblas, 1998), meaning there are numerous factors that result in groups to stick together and remain united. Even different sport groups or teams could exhibit differences in goals depending on the nature of the sport, for instance, competitive versus recreational, contact versus non-contact, or coacting versus interacting. For example, Lenk (1969) studied the Olympic champion German rowing team of the early 1960's and revealed that despite open conflict of the team, they proved to be successful in competition. It could be argued that where the team lacked social unity (e.g., athletes not liking one another) they made up for in task objectives (e.g., ability to achieve performance goals). These definitions help define the structure in which groups are perceived. It is important to have a conceptual framework to approach the study of groups in the sport setting that incorporates all the necessary components due to the many different contexts in which groups can be present, as well as the many different characteristics that make up a group.

A Conceptual Model for Cohesion

Fiedler (1967) initially conceptualized cohesion as a bidimensional construct with two predominant processes in groups: those associated with the development of social relationships and those associated with the achievement of group objectives. Adding to this concept, Carron and colleagues (1985) advanced a conceptual model of cohesion based on the assumption that both individual and group aspects of cohesion are represented (see Appendix A). Carron and colleagues placed particular emphasis on the study of groups in a sport-specific context by involving athletes as active agents in

identifying the meaning and concepts associated with group cohesion in sport. Other conceptual frameworks have investigated the concept of group dynamics in various social environments such as business and therapy (e.g., Cota, Evans, Dion, Kilik, & Longman, 1995; McGrath, 1984).

Carron and colleagues' (1985) conceptual model proposes that cohesion is multidimentional, meaning members integrate information from diverse aspects of the social world relevant to the group. In turn, a number of perceptions and beliefs are generated and classified into two broad categories within the model. Conceptually, *group integration* (GI) deals with the beliefs and perceptions individual members hold about the team as a totality. *Individual attraction to the group* (ATG) refers to each member's personal beliefs and perceptions about what initially attracted them to the team. Each of these categories is further divided into *task* and *social* orientations. The task aspect can be seen as a general orientation toward achieving the group's goals and objectives, whereas the social aspect can be seen as a general orientation toward developing and maintaining social relationships within the group. Thus, the model has four related dimensions (*GI-Task, GI-Social, ATG-Task, and ATG-Social)* that are believed to act together in creating a sense of cohesiveness among the group and its individual members.

The relative contribution of each dimension to cohesion is hypothesized to vary over time and environment, depending on the impact of moderator variables. For example, the nature of the group (e.g., motivational base having a task or social focus), or group development (e.g., months or years a team has been together; time of year) might influence the degree to which a particular dimension contributes to overall cohesion (Paskevich, Estabrooks, Brawley, & Carron, 2001). Another moderator with a possible

influence on the development of cohesion is sport type (Paskevich et al., 2001). For instance, research has revealed that interacting sport athletes often emphasized stronger emotional dependence on teammates (ATG-Social) compared to those who participated in coacting sports (Eagleton et al., 2007; Schurr, Ashley, & Joy, 1977). It is therefore important for coaches to be aware of these elements as they can change the development of cohesion.

Carron and colleagues' conceptual model allows the researcher to make assumptions about influential factors of group behaviours such as motivation, interaction, and goals (Paskevich et al., 2001). The conceptual model for cohesion has received general acceptance within both sport and social psychology literature. For instance, Dion and Evans (1992) have praised the model as a methodological and conceptual approach with applicability to wide variety of groups and teams. Although originally conceptualized for groups in the sport setting, A number of researchers praised its applicability in other social settings such as business, family, and exercise groups (e.g., Carron & Spink, 1993; Carron et al., 1998). In sport, the development and fostering of cohesion has often relied on the behaviours of formal leaders such as the coach (Desjardins, 1996). For this reason the following section will provide an overview of coaching science literature, particularly areas most relevant to this study.

Coaching Science

The last 20 years has seen a significant increase in empirical research concerning coaching science (Gilbert & Trudel, 2004; Rangeon et al., 2009). Despite this, the scope of the research has been underrepresented (Abraham & Collins, 1998). In an effort to gather and organize coaching science literature, Gilbert and Trudel comprised a

comprehensive review of 611 published studies in English language journals from 1970-2001. This review included physical copies, as well as online databases and encyclopaedias of research relevant to coaching science. An updated analysis recently compiled by Rangeon and colleagues included an additional 338 published studies on coaching science dating to 2008. The development of this database provided a basis for coach education and coach training by emphasizing the key elements of successful coaching and increasing the overall understanding of the coaching process (Gilbert & Trudel, 2004).

Gilbert and Trudel (2004) coded coaching research into five categories: behaviour, cognition, demographic, development, and measurement. These categories were not exclusive and some studies appeared in more than one category. The categories of cognition, behaviour, and development are most related to the current study. For example, the cognition and behaviour categories explained what coaches did and why they did it. The development category contained research on coach development, talent development, and team development, but more importantly, how coaches developed their sport knowledge. Specifically, one of the most extensively researched categories was coach behaviour, which included leadership, athlete satisfaction, instruction, and coach athlete interactions (Gilbert & Trudel, 2004). The authors revealed that these specific behaviours were those that coaches performed most frequently and as a result, nearly 70% of available coaching research was devoted to coaching behaviours. The research on cognition incorporated work on beliefs, philosophy, perceptions, and knowledge, and accounted for 33% of the total coaching literature. Thus, the high concentration of research focusing on coach behaviour supports its importance in coaching science.

Just as Gilbert and Trudel's (2004) analysis of coaching literature has facilitated the development of coaching research, Côté, Salmela, Trudel, et al.'s (1995) (CM) has facilitated the study of coaching knowledge. The CM has provided a theoretical framework for much of the recent research on expert coaching by examining coaches in different sport contexts such as coacting and interacting settings (Bloom, 2007). The model examines what coaches think and do and for these reasons, research using the CM and its practicality are the focus of the next section.

Coaching Model (CM)

Côté, Salmela, Trudel et al. (1995) interviewed 17 high-performance gymnastics coaches in an effort to develop a model of how coaches' knowledge was used to solve problems and develop athletes. Another purpose of the study was to develop a conceptual framework to help organize future research on coaching (Côté, 1998). The interview format helped the authors gain an in depth understanding of the principles and ideologies of expert coaches by allowing them to openly express their views on coaching.

The CM (Appendix B) suggests that coaches approach their job by creating a mental model of both their team and athletes potential. This mental model created by the coach is the foundation on which the coach assesses both the athlete's and team's potential for success. It is influenced by three peripheral components known as the coach's *personal characteristics*, *athlete's characteristics*, and *contextual factors* (Côté, 1998; Côté, Salmela, Trudel, et al., 1995). Sequentially, the coach incorporates the three peripheral components into his/her mental model in order to determine which of the three primary components are necessary in order to achieve peak development and performance known as the goal, otherwise defined as the most apparent task of the coach:

developing athletes. These primary components include *competition*, *organization*, and *training* that are also defined as the coaching process (Côté, 1998).

Primary Components

This section will focus on the primary components of the CM: organization, training, and competition. Coaches apply each component in order to provide an optimal setting for athletes to fully develop (Côté, Salmela, Trudel, et al., 1995).

Organization. Organization is the process by which coaches apply their knowledge structure and coordinate their coaching tasks to create an optimal training regime and competitive environment for their athletes (Côté, Salmela, Trudel, et al., 1995). Research has suggested that organization is a crucial coaching quality of both individual and team success, and is often overlooked by inexperienced coaches (Bloom, 2011; Côté & Salmela, 1996; Desjardins, 1996; Vallée & Bloom, 2005). Desjardins identified a number of key organizational tasks of expert team coaches including creating a vision and developing team cohesion. Establishing and selling a vision involves creating a mental representation or model of the athletes or teams potential (Côté, Salmela, Trudel, et al., 1995; Côté, Salmela, & Russell, 1995; Desjardins, 1996; Vallée & Bloom, 2005). Specifically, Vallée and Bloom identified key elements that university interacting coaches identified for building a successful sport program. Ultimately, by using the university sport experience as a platform, each of the coaches' strategies was directed towards developing great athletes as well as great people. In general, Vallée and Bloom found that their coaches' vision (i.e., goals and directions) and selling of that vision to the players were fundamental to their building of a successful program. By

systematically adding players that met the requirements of their long term vision, coaches could then focus on the holistic development of their athletes and team.

Included in organization are structured cohesion-building strategies throughout the season. For instance, Desjardins (1996) noted that coaches often integrated team building exercises into physical training (e.g., team workouts) while also allowing their athletes personal time away from the team's structured environments. According to Bloom and colleagues (2003) coaches believed that planning and organizing were important to the development of team cohesion because it allowed them to create a consistently stable environment to allow cohesion to develop. Bloom (2002) also concluded that organizing a season in such a way allowed the coach to create a solid foundation for the season, and provided a positive learning environment for athletes by creating innovative and enjoyable training sessions.

Overall, coaching success in sport begins with establishing a clear vision of the team's short and long-term objectives. The vision has helped establish the organizational guidelines that must be met in order to realize the coach and athlete's direction for such goals.

Training. Training involves applying ones knowledge towards helping athletes acquire and perform the appropriate skills during practice (Côté & Salmela, 1996; Côté, Salmela, Trudel, et al., 1995). Training consists of physical training (developing athletes strength, endurance and power), technical training (teaching sport specific techniques, basic skill development), mental training (dealing with stress, use of imagery), tactical training (rehearsing game-like situations) and intervention style (autocratic vs democratic) (Bloom, 2002; Côté 1998; Côté et al., 1995; Durand-Bush 1996). With

respect to both interacting and coacting coaches, training sessions are an opportunity to impart knowledge to athletes, as well as to strengthen and reinforce their vision (Bloom, 1996; Côté, Salmela, Trudel, et al., 1995).

Some empirical studies have provided insight into the training practices of expert coaches (e.g., Bloom, Crumpton, & Anderson, 1999; Durand-Bush, 1996; Tharp & Gallimore, 2004). For instance, Bloom and colleagues conducted a systematic observation of former Fresno State basketball coach Jerry Tarkanian. Examinations of Tarkanian's coaching behaviours revealed that nearly 30% of his instructions were tactical. Moreover, Bloom and colleagues suggested that coach Tarkanian's success was based on his ability to create game-like situations during practices prior to facing specific opponents. On the other hand, Tharp and Gallimore found that legendary UCLA basketball coach John Wooden predominantly used technical cues and taught fundamental basketball during training. As opposed to coach Tarkanian, Tharp and Gallimore attributed Wooden's success to his meticulous planning of training sessions, while also indicating that he often worked individually with players as often as worked with the team as a whole. This was necessary, according to Wooden, because he believed each player learned differently. These findings were consistent with Côté and Salmela's (1996) research on expert gymnastic coaches, which suggested that coacting sports required similar training environments to interacting sports.

In addition to other forms of training, mental training involves teaching the brain to think properly and react in pressure situations to achieve performance success and personal well-being (Durand-Bush, 1996). More specifically, mental skills have been subdivided into four distinct categories including: foundation (e.g., self awareness),

performance (e.g., perceptual-cognitive skills), personal development (e.g., identity achievement), and team skills (e.g., cohesion, leadership) (Vealey, 2007). While some literature has shown that elite coaches were not convinced of its importance in sport (Durand-Bush, 1996), others have praised its usefulness (Côté et al., 1995; Durand-Bush & Salmela, 2002). For instance, certain coaches felt direct incorporation of mental training often increased the stress load of the athlete, thus placing it lower in priority after physical and technical training. On the other hand, expert gymnastic coaches recognized the importance of a sport psychologist to help athletes with aspects of mental training such as motivation, visualization, and controlling their emotions (Côté et al., 1995). More recently, Durand-Bush and Salmela (2002) stated that mental training often worked well with other training activities, and ultimately helped prepare athletes for competition. Furthermore, Smith (1992) found that coaches with training in mental skills were at an advantage due to their ability to directly integrate them into overall training. Combined, this suggests that coaches integrate all types of training in athlete development and each method has the potential to be a significant contributor to athletic enjoyment and success.

Competition. This aspect involves the tasks coaches perform prior to, during, and following competition (Côté, Salmela, Trudel, et al., 1995). Success of coaches and athletes was said to derive from the routines and tasks occurring the day of competition (Bloom, Durand-Bush, & Salmela, 1997; Côté, Salmela, Trudel, et al., 1995). Specifically, Bloom and colleagues investigated pre- and post-competition routines of coaches and revealed that pre-competition activities occurred both on and off site and included both physical and mental aspects. Bloom and colleagues further stated that prior to competition, coaches mentally rehearsed their game plan, held team meetings, and

dealt with players individual concerns. Moreover, coaches used self-talk in order to rehearse their game plan prior to meeting their players to ensure its delivery was clear when stressing key points (Bloom et al., 1997; Thelwell, Weston, Greenlees, & Hutchings, 2008). In their exploration of psychological skills used by coaches, Thelwell and colleagues demonstrated that coaches applied imagery, self-talk, and relaxation techniques prior to training and competition in order to prepare them for any problematic circumstances that may arise during competition. These findings are consistent with Côté, Salmela, Trudel and colleagues, who indicated that expert coaches often saw potential distractions or disturbances before they occurred.

During competition, some coaches maximized their involvement by providing constructive feedback and interacted with athletes and other coaches (Bloom, 2002). Following competition, coaches stressed the importance of controlling their emotions when addressing the team and adopting behaviours that best represented the outcome of the game (Bloom et al., 1997). Post-competition meetings allowed coaches to relay information to the athletes but overall, coaches believe detailed analyses were generally better left for next day's practice (Bloom et al., 1997). Taken together, the mental preparedness of a coach created an optimal competitive environment for his/her athletes to develop and perform.

Peripheral Components

The following section will focus on the three peripheral components of the CM. This includes *coach characteristics, athlete characteristics,* and *contextual factors.* Each of the components impacts the mental model and modifies the strategies used by the coach for the implementation of the primary components (Côté, Salmela, Trudel, et al.,

1995). For instance, coaches may use different training techniques and mental skills to athletes who exhibit strong mental toughness and more advanced tactical skills compared to an athlete who lacks physical strength but is strong technically (Côté et al., 1995).

Athlete Characteristics. Athlete's characteristics involve any variables dealing with the athlete's mental and physical stage of learning, personal demands, personal abilities and other personal characteristics that could influence the coaching process (Côté, Salmela, Trudel, et al., 1995). Giacobbi, Roper, Whitney, and Butryn (2002) revealed that coaches viewed the personal characteristics of the athlete as being the most important determinant of athletic success. Specifically, this study provided particular insight into what coaches believed to be the key determinants of athletic success and revealed that coachability (i.e., receptive to instruction, open to change) and motivation were the most important psychological characteristics an athlete could possess. Further, Giacobbi and colleagues concluded that coaches must be aware of their athletes characteristics in order to foster the proper environment for each, for example, when and how to motivate an athlete.

The interpersonal dynamics between the coach and athlete are central to the sporting experience. Coaches and athletes work closely together; they develop close relationships and have high degrees of interaction and reliance on one another (Jowett & Cockerill, 2003). This is manifested by the athlete's need to acquire skill and the coach's need to bestow knowledge, expertise, and experience to the athlete (Olympiou, Jowett, & Duda, 2008). This complex process primarily unfolds in the training environment or during periods of practicing required skills, techniques, or strategies (Antonini Philippe & Seiler, 2006). A sport where coach-athlete relationship reflect positive relational

properties is likely to experience high levels of team cohesion whereas low levels of cohesion are expected when the coach and his of her athletes do not get along well (Olympiou et al., 2008).

Coach Characteristics. Coaches' personal characteristics include any part of the coach's philosophy, personal demands, beliefs, and overall knowledge of the sport (Bloom & Salmela, 2000; Côté, Salmela, Trudel, et al., 1995). Accompanied with the coaches' personal style, experience, and overall investment, these characteristics influence the outcome of the three primary components of the mental model (Côté, Salmela, Trudel, et al., 1995).

A recurring trend has been that expert team coaches believed learning to coach was an on-going process that occurred throughout their careers (Bloom & Salmela, 2000; Carter & Bloom, 2009; Vallée & Bloom, 2005). They suggested that coaches learned through interactions with fellow coaches, communication with athletes, and hard work. In addition to these skills, Carter and Bloom revealed that flexibility and open mindedness and overall passion for the game were crucial characteristics for coaching success. Furthermore, for many of these coaches, it was not enough to maintain an open mind to learn. It was found that they constantly attempted to evaluate their own progress and implemented career changes they believed would help them improve (Bloom & Salmela, 2000). Thus, it can be concluded that coach development is dynamic in nature.

Contextual Factors. Contextual factors are factors other than athlete or coach characteristics, such as working conditions that impact the organization, training, and competition components (Côté, Salmela, Trudel, et al., 1995). Possible contextual factors include family support, support services through the athletic department, financial

resources, or level of competition (i.e., high school, university, elite) (Côté, 1998; Davies, Bloom, & Salmela, 2005; Draper, 1996).

According to Draper (1996), further distinctions exist at the cultural level, specifically regarding Canadian versus American collegiate sport programs. According to Draper, Canadian universities typically lacked financial resources compared to American universities, leading to decreased scholarship offerings and poorer equipment quality. Davies and colleagues (2005) revealed that financial constraints and increased administrative responsibilities caused coaches to spend less time concentrating on coaching duties and as a result, decreased job satisfaction. Finally, contextual factors stem farther than financial and equipment limitations. Factors such as inclement weather for outdoor sports proved to be problematic for participants in Saury and Durand's (1998) study investigating French sailing instructors. Authors were able to identify key characteristics of these expert coaches including developing a more adaptive coaching style to create their own successful coaching environments despite the presence of contextual factors. The factors above suggest that coaches are often forced to adapt to a variety of factors beyond their control that affect their coaching. However, regardless of the conditions, coaches were often expected to coach successful, competitive teams.

In summary, the CM brings to light the variables that need to be observed and assessed by coaches in order to develop and implement a plan of action for developing athletes. The underlying model of the process used by expert coaches to develop athletes was an important basis for the formalizing of coaching knowledge (Côté, Salmela, Trudel, et al., 1995).

CHAPTER 3

Method

In order to gain an in depth understanding of the experiences of cross-country running coaches relating to cohesion, a case study design was used to explore the following central research question: what are the coach's experiences and knowledge of cohesion with cross-country running athletes? Case study research involves the study of an issue explored through one or more cases within a bounded system (Creswell, 2007). This methodological approach was valuable in examining the thoughts, feelings, and experiences of elite cross-country running coaches relating to cohesion. During the past two decades, there has been a growing realization of the potential benefits of qualitative research within sport psychology (Culver, Gilbert, & Trudel, 2003; Strean, 1998). Patton (2002) argued that quantitative methods require the use of standardized measures and the perspectives and experiences are placed into a limited number of pre-determined response categories. Qualitative methods on the other hand, facilitate the study of issues in depth and detail by providing concise findings. This chapter will describe the qualitative methodology used for this study and is divided into the following categories: worldview and research design, participants, interview technique, data analysis, trustworthiness, and assumptions.

Worldview and Research Design

A worldview or paradigm is known as a basic set of beliefs that guide action (Creswell, 2007; Guba, 1990). Specifically, a postpositivist worldview was used for the present study where the researcher took a scientific approach to research and had the elements of being well reasoned and based on a priori theories (Creswell, 2007). From a

practical perspective, qualitative inquirers with this particular worldview likely conducted research based on a series of logical steps. Postpositivists contend that it is possible, using empirical evidence, to distinguish between more and less plausible claims. They are also more likely to use computer programs to assist data analysis and use various methods of trustworthiness during data collection. (Creswell, 2007; Patton, 2002).

Participants

Participants were six Canadian Interuniversity Sport (CIS) cross-country running head coaches. Participants were chosen from universities across Québec, Ontario, and the Maritime provinces. These locations represent three of the four major CIS regional associations (Atlantic University Sport, Ontario University Athletics, and Québec Student Sport Federation). These three associations were chosen due to geographical convenience of the research team. The sport of cross-country running was chosen because of its strong coacting nature. Each team member competes in the same distances in a head to head setting for each race. Cross-country running coaches also have a prolonged commitment to their program, employ structured and rigorous training programs, and prepare their athletes to perform in competition. Although financial resources are scarce for most teams, the intensity and frequency of training and competition is comparable to many "high profile" and "high budget" CIS sports (e.g., hockey, football, and basketball).

The selection of expert coaches was based on following criteria from previous studies on coaching expertise (e.g., Bloom, Durand-Bush, & Salmela, 1997; Côté et al., 1995; Vallée & Bloom, 2005). Furthermore, the criteria were in agreement with Côté, Young, North, and Duffy's (2007) definition of an expert coach. First, they were all head coach of a cross-country running team that is currently member of the CIS. CIS

membership is based on paying member fees and participation in CIS competition (or regional competition). Second, they each had a minimum of 10 years head coaching experience at the collegiate level or higher in cross-country running. Second, they each completed at least a Level 3 in the old National Coaching Certification Program (NCCP) and/or a competition stream certification (high performance) from the new NCCP[2]. Third, each participant reached the CIS annual competition at least once in his last five years of coaching. Finally, each participant was identified as one of the best in their field by a group of knowledgeable individuals in the sport. This group included two highly accomplished cross-country and track and field coaches with over 35 years of combined coaching experience at the collegiate level, and the current research team. Table 1 provides a detailed summary of the six participants' coaching background and accomplishments prior to the commencement of this study.

Participants who met the aforementioned criteria were contacted by the lead researcher via e-mail or telephone, informed of the nature of the study, and invited to participate. Prior to the interview, participants were asked to complete a consent form (Appendix C) in compliance with McGill University ethics policy and a short demographics questionnaire (Appendix D). After they filled out and returned the consent form, each coach was interviewed individually for a period of time ranging from one to two hours. The interviews were conducted at a mutually agreed upon time, date,

[2] The new NCCP is made up of three streams and a total of eight contexts, each with its own requirements. Coaches in the competition stream usually have previous coaching experience or are former athletes in the sport. They tend to work with athletes over the long term to improve performance, often in preparation for provincial, national, and international competitions. The Competition stream has three coaching contexts: Introduction, Development, and High performance http://www.coach.ca/eng/certification/nccp_for_coaches/nccp_model.cfm

Table 1

History of coaching background and accomplishments

Code number	**C1**	**C2**	**C3**	**C4**	**C5**	**C6**
Age Range	50-59	50-59	Over 60	40-49	Over 60	40-49
CIS Head Coaching Experience	24 years	11 years	47 years	13 years	43 years	10 years
Highest Level of Coaching Certification	NCCP III	NCCP III*	NCCP III*	NCCP IV Diploma NCI	NCCP III*	NCCP IV Diploma NCI
National Titles	0	0	1 Women	7 Women 8 Men	7 Women 4 Men	1 Women
Personal Head Coaching Awards	-29 x Conference Coach of the Year (M+W)	-2 x Provincial Coach of the Year (M+W)	-11 x Conference Coach of the Year (M+W) -Provincial Hall of Fame	-17 x CIS Coach of the Year (M+W) -3 x Conference All-Sport Coach of the Year (M+W)	-14 x CIS Coach of the Year (M+W)	-1 x CIS Coach of the Year (W) -9 x Conference Coach of the Year (M+W)
International Head Coaching Experience	N/A	-3 x World Cross-Country Championship -Pan American Junior Games	-World Cross-Country Championship	-National Track and Field Team -Olympic Observer Coach	-World University Championship	-3 x World University Championship - Jeux de la Francophonie
Athlete's Success	19 All Canadians	10 All Canadians	41 All Canadians	60 All Canadians 10 CIS MVP's	63 All Canadians	24 All Canadians

* These coaches completed their NCCP level III in the old stream and have most courses for their level IV but have not completed them.
NCCP – National Coach Certification Program
NCI – National Coaching Institute
CIS – Canadian Interuniversity Sport

and location in cities across Ontario, Quebec, and the Maritime provinces. Furthermore, all interviews were conducted face-to-face rather than over the telephone. According to Creswell (2007), a significant advantage of an in-person interview is the ability to see the informal communication such as facial expressions and body language. No follow-up interviews were required in this study.

Interview Technique

Interviews were aimed at obtaining the coach's interpretations and understanding of the world in which they lived and work (Kvale & Brinkmann, 2008; Rubin & Rubin, 1995). Interviews also go beyond every day conversation, and are conducted to gain a complex and detailed understanding of an issue by listening to the participants lived experience (Creswell, 2007; Kvale & Brinkmann, 2008). This section will explain the type of interview and the structure of the interview guide.

Interview Type. Semi-structure open-ended interviews were carried out with the participants. To ensure consistency, all interviews were conducted by the primary researcher. Semi-structured, open-ended interviews allow researchers to initiate a topic of discussion, while giving the interviewee the freedom to answer openly with little restrictions (Patton, 2002; Rubin & Rubin, 1995). This format differs from a structured interview format in which the interviewer asks the participant a series of pre-established questions with a limited set of response categories and unstructured interviews where the researcher suggests the subject for discussion but has few specific questions in mind (Fontana & Frey, 1994). Using open-ended questions allows the researcher to capture the viewpoints of the respondents without heavily influencing those points through the use of a questionnaire (Rubin & Rubin, 1995). Furthermore, Dexter (1970) stated the

importance of giving the interviewee the opportunity to introduce what he/she regarded as relevant rather than relying on the interviewer's perceptions of relevancy. In other words, a semi-structured interview resembles that of an everyday conversation with the interviewee doing most of the talking (Lincoln & Guba, 1985; Rubin & Rubin, 1995).

The primary goal of interviews is to understand the experience. Thus, it is important for the researcher to establish a positive rapport with the interviewee by initiating general discussion related to the coaching profession and sport (Fontana & Frey, 1994). Prior to the interview, the researcher shared some of his background information such as the number of years as a runner, knowledge, other experiences, and interest in the sport of cross-country running. This allowed the interviewee to better understand how personal experiences led to the study of this topic as well as provide some commonality between both parties (Patton, 2002; Rubin & Rubin, 1995).

Interview Guide. An interview guide (Appendix E) was created for the present study by the researcher and faculty members with knowledge and expertise in interview-based coaching research. This guide was used for each individual interview to ensure consistency. This framework allowed the researcher to keep the interview on course while allowing sufficient flexibility for exploring the coach's perspective. The main questions were preplanned and directed the discussion. The interview guide was broken down into three sections. Section one contained opening statements intended to introduce the main topic of study and to initiate the discussion (e.g., Can you describe your coaching evolution?). This introductory question intended to cover information regarding the participants coaching background and experience. Section two consisted of questions based on Côté and colleagues' (1995) Coaching Model and Carron, and colleagues'

(1985) conceptual model for cohesion (e.g., How does the athletes' relationship with each other affect their competition behaviours?). Section three consisted of concluding questions which provided the coach with the opportunity to add any comments they felt were relevant to the study. The interview consisted of three types of questions: main questions, probes, and follow-up questions (Rubin & Rubin, 1995). Main questions gave the participant the opportunity to expand on their knowledge relating to a specific area of the study (Patton, 2002). Probes were used to deepen the response to a question, increase the richness and depth of the response, and give cues to the interviewee regarding the desired level of response (Patton, 2002). Finally, follow-up questions were used to clarify areas of the participant's experience and knowledge that were overlooked (Patton, 2002; Rubin & Rubin, 1995).

Data Analysis

For a case study, analysis consisted of first providing a detailed description of the and its setting. The main objective to analyzing semi-structured interviews is to build a system of categories emerging from the unstructured data. These categories were created by a "bottom-up" rather than "top-down" approach (Bloom et al., 1997). In other words,categories were created from the data obtained in the interviews and not predetermined before the analysis. This inductive approach followed the guidelines suggested by Côté and colleagues (Côté et al., 1993; Côté, Salmela, & Russell, 1995) and included four steps: creating *meaning units, tags, properties,* and *categories* (Côté et al., 1995).

Prior to data analysis, interviews were transcribed verbatim with minor edits (Côté et al., 1995). For example, names, schools, and locations were changed to code

numbers to ensure confidentiality of each participant. Next, each verbatim transcript was reviewed several times in order to get an overall sense of each interview. A line-by-line analysis was conducted and divided into *meaning units.* Tesch (1990) described meaning units as a segment of text comprised of words, phrases, or entire paragraphs that convey the same idea and relate to the same topic. Each meaning unit received a tag relevant to its content, for a total of 537 tags. Once tags were assigned to each meaning unit, they were examined for similarities and grouped together to form larger classifications called properties (Côté et al., 1995). Each property then received a tag based on the common features shared by the meaning units (Côté et al., 1995). Finally, the properties were examined and grouped into similar collective sets named categories, in a comparable manner to the creation of properties The study had a total of nine properties group evenly into 3 higher-order categories. However, when grouping categories, a higher level of abstract analysis was required (Côté et al., 1995). The data was examined until a saturation of information was achieved.

Trustworthiness

Trustworthiness methods are used by qualitative researchers to minimize potential misunderstandings or misinterpreted data (Creswell, 2007; Patton, 2002). This section will include the different techniques used in this study to ensure trustworthiness including pilot testing, prolonged engagement, reflexivity, member checking, and peer review.

Prior to the interview, the researcher gained important knowledge on qualitative inquiry by reading several important sources (e.g., Creswell, 2007; Patton, 2002; Rubin & Rubin, 1995; Sparkes, 1998). Additionally, two pilot interviews were conducted under the supervision of an experienced interviewer. Feedback was provided based on overall

interview technique and proper use of the interview guide. Both coaches who took part in these interviews were certified high-performance cross-country running coaches. The first was a high school and CÉGEP head coach and CIS assistant coach. The second was a CIS head coach with six years of experience at the collegiate level. These pilot interviews provided the researcher with the opportunity to practice interviewing skills and assess the study guide (Maxwell, 1996).

Prolonged engagement is described as the investment of time by the researcher to become familiar with the culture and vocabulary of the participant, as well as build trust with them (Lincoln & Guba, 1985; Patton, 2002). In the present study, the researcher was a former provincial cross-country and track and field runner and was aware of the language and culture of the sport. In addition the researcher has worked closely with several CIS coaches in areas of mental training and has acquired a wealth of knowledge and experiences at this level. Taken together, these experiences were helpful in fulfilling the guidelines of prolonged engagement (Lincoln & Guba, 1985).

Reflexivity suggests that qualitative inquirers be attentive to and conscious of the cultural, political, social, linguistic, and ideological origins of one's own perspective and of those one interviews (Patton, 2002; Lincoln & Guba, 1985). Being reflexive involves self-questioning and self understanding, of oneself, the participants, and the audience (Patton, 2002). As a qualitative researcher, actively participating in the environment where the study will be conducted is of great importance to gain a rich and more in depth perspective on coacting sport coaches. As a provincial and national level competitor, the researcher has obtained valuable first-hand knowledge of the sport of cross-country

running and track and field and has gained an insider's perspective and was able to interact closely with the participants.

Member checking is an essential technique in ensuring trustworthiness for establishing credibility in research (Lincoln & Guba, 1985, Patton, 2002). Member checks occur when the findings are tested with members of the group from whom the data was originally collected (Lincoln & Guba, 1985). Furthermore, they permit participants to correct any errors and challenge what are perceived as incorrect interpretations (Rubin & Rubin, 1995). For the present study, member checks occurred on three different occasions. First, directly following the interview, each participant was given the opportunity to add or modify any response previously communicated during the interview. Second, a full verbatim transcript of the interview was sent to each participant via e-mail. At this point, the participant had the opportunity to clarify, modify, eliminate, or volunteer any comments made during the interview. Each participant responded with little to no modifications. Finally, each member was sent a summary of the results where they were asked to state any concerns, questions, or comments with regards to any findings.

A final method of trustworthiness used was peer review. Peer review involved an impartial party examining the data analysis to ensure credibility (Côté, Salmela, & Russell, 1995; Rubin & Rubin, 1995). The peer reviewer was a graduate student in sport psychology who was familiar with literature that pertained to the present study and coaching science. He was randomly presented with 135 of the 537 total meaning units (25%) and was asked to categorize each meaning unit (MU) with one of the 56 tags that were previously generated by the research team. The peer reviewer correctly placed 115

MU's under the appropriate tag, achieving a reliability rate of 85%. Of the 20 total discrepancies, the most common mistakes were substituting "athlete leadership – importance" with "athlete leadership – cohesion" and substituting "relationship between teammates" with "developing friendships". Following a discussion between the researcher and the peer reviewer, it was agreed that a lack of clarity regarding the differences between these tags led to the discrepancies. Following a discussion between both individuals, a total of 3 meaning units were changed from their original tags. For the remainder of the discrepancies, it was agreed that mistakes were attributed to a lack of context of the meaning units. The same peer reviewer classified the 56 tags into nine properties achieving 89%. The six misplaced tags were slightly more vague than the other tags, and the disagreements between the peer reviewer and the researcher were discussed until an agreement was reached. In the end, no changes were required. Finally, the same reviewer placed the nine categories into three categories and achieved a 100% rate of reliability. This peer review process helped reduce researcher bias and ensured that an accurate representation of the coaches experiences was formed (Lincoln & Guba, 1985; Rubin & Rubin, 1995; Sparkes, 1998).

Assumptions

Behavioural scientists often overlook certain assumptions made in research (Slife & Williams, 1995). These assumptions may be divided into three types: paradigmatic, prescriptive, and causal (Strean, 1998). Paradigmatic assumptions are the hardest of all assumptions to uncover because they are often not recognized as assumptions. They are basic organizing ideas used to order the world and are often taken for granted. For example, this study assumed that cross-country running coaches were able to discuss and

understand the meaning of cohesion and how it was developed. It was possible that although coaches performed these behaviours, they may have used alternative terminology. Prescriptive assumptions express how we believe individuals should behave. For example, it was assumed that CIS coaches developed cohesion in their teams, however, this likely did not reflect the behaviours of all coaches. Some cross-country coaches may have focused on other factors of team development instead of cohesion. Finally, causal assumptions are usually stated in predictive terms such as an "if-then" statement. An assumption that fell under this category was coach's perceptions or beliefs reflected how they behaved. In other words, it was possible that a coach believed cohesion was important but did not "practice what he preached". A second causal assumption was that interviewing coaches helped the researcher learn about the athletes. In other words, while the coaches believed cohesion was an important component of a cross-country running team, the athletes may have thought otherwise.

CHAPTER 4

Results

This chapter presents the findings of the inductive qualitative analysis of this study. To begin, a brief summary of the nature of the data will be provided including a description of the findings that emerged from the analysis. Following this, the three higher order categories that emerged from the data, *coach personality and experiences, athlete personality and characteristics,* and *team development* will be reviewed. Throughout, quotes from the coaches will be used to illustrate their thoughts and opinions about topics, and followed by a label (e.g., C1 – C6) to credit the coach that provided the quotation.

Nature of the Data

The six interviews in the study resulted in a total of 537 meaning units. From the 537 meaning units, 56 tags emerged. The number of meaning units discussed by each participant varied from 54 (C1) to 151 (C4). Given the semi-structured and open-ended nature of the interviews, it is not surprising that a wide variety was found between the numbers of meaning units by each coach. These disparities may be due to a difference in formal education, knowledge acquisition, or overall coaching experience. For instance, C4 has numerous international and club team coaching experiences as well as a higher level of formal coaching education compared to any other coach. It is therefore not surprising that, due to these experiences, C4 may have shared more during his interview. However, a higher number of meaning units did not necessarily reflect a higher level of importance on a particular topic. Rather, it may be that some coaches were able to express their opinions and thoughts more concisely than others and used fewer examples.

For instance, C4 discussed *goals* nearly three times more often than any other participant, whereas C5 discussed *developing the team environment* nearly twice as often as any other participant. In these cases, it may be that these coaches provided more examples and spoke about it longer without necessarily placing more emphasis on the particular topic. Similarly, not all topics were discussed by each participant, therefore, the frequency of each tag from the total sample ranged from 1 to 26. This variation may have reflected the significance of these topics to the coaches. For example, the tag *training camp* was frequently cited by all participants (n=22). This may be due to the importance of implementing a training camp in building cohesion within their team, or it may have been a direct response to a question asked (i.e., why is cohesion important in cross-country running?). By comparison, tags such as *altruism* or *post-graduate education* were discussed by only one of the six coaches (C4). These discrepancies could be due to different experiences and knowledge acquisition. For instance, C4 discussed how much he learned from his previous coaches, therefore, it is possible that since no other coaches shared these same learning experiences they do not share the same views.

Each meaning unit was assigned a tag based on its content. Table 2 (see Appendix F) provides an alphabetized list of topics discussed by each participant. The 56 tags were organized based on their similarities of content into nine properties, which are shown in Table 3. Tags were then examined for similarities and grouped together to form larger classifications called properties. Similar to the analysis of tags, properties were created from the data obtained in the interviews and not predetermined before the analysis.

Table 3
Properties and tags with frequencies as expressed by each participant

Properties and Tags	n	C1	C2	C3	C4	C5	C6
Goals	**43**	**3**	**8**	**6**	**15**	**6**	**5**
Goal setting – individual	14	1	2	2	6	1	2
Goal setting – team	9	0	2	0	4	3	0
Goals – monitoring	9	1	2	0	3	1	2
Goals – teammates	4	0	0	1	2	1	0
Goals – thoughts and beliefs	7	1	2	3	0	0	1
Athlete Leadership	**46**	**3**	**9**	**0**	**14**	**11**	**9**
Athlete leadership – characteristics	21	1	3	0	5	6	6
Athlete leadership – cohesion	5	0	2	0	1	1	1
Athlete leadership – importance	12	1	4	0	4	3	0
Athlete leadership – physical ability	8	1	0	0	4	1	2
Athlete Make-up	**45**	**6**	**3**	**7**	**15**	**13**	**1**
Athlete – social skills	3	0	0	0	2	1	0
Athlete – physical ability	9	2	1	1	3	2	0
Talent of athletes	6	0	1	1	1	3	0
Athlete – value systems	2	0	0	1	1	0	0
Athlete – personal growth and development	5	0	1	0	0	3	1
Community involvement	7	0	0	1	6	0	0
University athletes	11	2	0	3	2	4	0
Scholarships	2	2	0	0	0	0	0
Athlete Psychological Characteristics	**35**	**6**	**6**	**7**	**9**	**5**	**2**
Altruism	2	0	0	0	2	0	0
Athlete – discipline	6	2	2	1	1	0	0
Athlete – mental toughness	11	3	0	1	4	2	1
Athlete – work ethic	8	1	3	4	0	0	0
Motivation	8	0	1	1	2	3	1
Coach Knowledge Acquisition	**15**	**0**	**2**	**0**	**5**	**1**	**6**
Formal coaching education	8	1	2	0	1	1	3
Learning from other coaches	6	0	0	0	3	0	3
Post-graduate education	1	0	0	0	1	0	0

Table 3 (Continued)

Coach Pre-CIS Experiences	**53**	**4**	**7**	**8**	**21**	**6**	**8**
Athletic experiences	7	1	1	1	2	1	1
Competitive running experiences	14	1	1	3	3	2	4
Evolution into coaching	25	1	3	4	12	2	3
Coaching other sports	4	0	1	0	2	1	0
Club team coaching	3	0	1	0	2	0	0
Coach Make-up	**76**	**4**	**11**	**13**	**27**	**18**	**3**
Reasons for coaching	6	0	0	0	4	2	0
Love of coaching	7	0	1	3	1	2	0
Relationship with athletes	13	2	1	2	7	1	0
Coaching ability	5	0	0	0	2	3	0
Coach leadership	14	0	3	1	6	1	3
Coach thoughts and beliefs	12	2	3	2	3	2	0
Cross-country running	19	0	3	5	4	7	0
Coaching Tasks and Responsibilities	**90**	**10**	**9**	**16**	**23**	**10**	**14**
Team strategies during competition	12	0	3	1	5	1	2
Team strategies during practice	4	1	0	2	0	1	0
Coaching tactics	11	1	1	3	5	1	0
Recruiting	16	2	2	3	3	2	4
Pre-season preparations	17	3	1	3	5	3	2
Training camp	22	3	2	4	5	2	6
Importance of winning	8	1	0	1	3	2	1
Developing the Team Environment	**135**	**18**	**18**	**25**	**22**	**33**	**19**
Social gatherings	9	2	0	3	1	1	2
Developing friendships	3	0	0	2	0	1	0
Relationship between teammates	16	2	3	3	2	2	4
Teammates supporting each other	10	1	2	1	3	3	0
Caring for teammates	4	0	0	1	2	1	0
Having fun	8	0	0	3	0	2	3
Team atmosphere	22	4	3	4	3	7	1
Team conflict	6	1	1	3	1	0	0
Being a team player	5	1	0	0	3	1	0
Intrateam competition	19	3	4	3	2	4	3
Cohesion – importance	22	2	4	1	5	5	5
Cohesion – thoughts and beliefs	11	2	1	1	0	6	1
Totals	**537**	**54**	**73**	**82**	**151**	**102**	**67**

The nine properties were then grouped into three higher order categories through the same inductive procedure that was used in the previous level. The three categories were labeled *coach personality and experiences, athlete personality and characteristics,* and *team development.* The nine properties regrouped within the three categories are shown in Table 4.

Table 4
Categories and properties with frequencies as expressed by each participant

Categories and Properties	n	C1	C2	C3	C4	C5	C6
Coach Personality and Experiences	**144**	**8**	**20**	**21**	**53**	**24**	**17**
Coach Pre-CIS Experiences	53	3	7	8	21	6	8
Coach Knowledge Acquisition	15	1	2	0	5	1	6
Coach Make-up	76	4	11	13	27	18	3
Athlete Personality and Characteristics	**126**	**15**	**18**	**14**	**38**	**29**	**12**
Athlete Make-up	45	6	3	7	15	13	1
Athlete Psychological Characteristics	35	6	6	7	9	5	2
Athlete Leadership	46	3	9	0	14	11	9
Team Development	**267**	**31**	**35**	**47**	**60**	**48**	**38**
Goals	43	3	8	6	15	6	5
Coaching Tasks and Responsibilities	90	10	9	16	23	10	14
Developing the Team Environment	134	18	18	25	22	32	19
Totals	**537**	**54**	**73**	**82**	**151**	**102**	**67**

Coach Personality and Experiences

The higher-order category of *coach personality and experiences* included 143 meaning units and represented 27% of the total data analyzed. This category included information regarding the knowledge acquisition of the coach from their athletic career to their current CIS coaching position. It also included interpersonal characteristics that shaped their career.

Coach Pre-CIS Experiences

This property included information about coaches' athletic and coaching experiences prior to becoming a CIS head coach. Coaches talked about their athletic career, both as a runner and non-runner. They also discussed their evolution into coaching, including coaching other sports and coaching cross-country running at different levels. This property was related to the opening questions of the interview guide: briefly discuss your athletic career, including participation in sports involving intrateam competition.

The majority of coaches were introduced to the sport of cross-country running in high school. All six coaches considered themselves multi-sport athletes during their youth and adolescence. Furthermore, five of the six coaches competed in cross-country running collegiately, while two received All-Canadian honours. One coach competed at the high school and provincial level but did not reach the collegiate level. The following quotes described these experiences:

> Growing up, I competed in sports related to cross-country like decathlons, so obviously I ran 1500meters and other mid-range distances during those competitions. I also played several other sports such as football and basketball at the University level and during my teenage years, I did gymnastics, competitive swimming, and tennis. I suppose you could call me a jack-of-all-trades, so a multi-sport athlete. (C5)

> I came into distance running through the back door and relatively late as a collegiate athlete. Soccer and basketball were my main sports and I did some Nordic skiing in the winter so I suppose I built some endurance over time. I was recruited to play soccer in university and over time, I drifted towards running in order to stay healthy. I discovered that I enjoyed it more, and was better at it, so I switched over to track and cross-country and eventually became pretty good. I was never an All Canadian but I competed. (C4)

Coaches also discussed their evolution into this profession. Specifically, three coaches discussed their experiences as athlete leaders and how this influenced their progression into coaching. The influences of formal leadership roles to coaching are expressed in the following quotes:

> I started taking a leadership role as an athlete during my collegiate running career. I had taken a few years off from running and school, so when I came back, I was considered as one of the more senior people. Therefore, I was given a leadership role, which allowed me to work very closely with the coaching staff. This was around the time that the coach was getting ready to retire and he asked if I wanted to make the jump to full time coaching, so it was a smooth transition for me. (C6)

> I never really thought of coaching as a vocation or an avocation. So the quick nugget is: during my final year as a runner, my coach suffered a heart attack and was hospitalized. He lived and is fortunately still alive today, but had to take a step back from his coaching duties for a while. One of the seniors guys on the team sort of took over and the rest of us all pitched in. So we all got a taste of what went into coaching a team. At the time I was also team captain so there was a certain element of leadership that went along with it. I really enjoyed it and I guess you could say that it was a kind of a catalyst for me. (C4)

In addition to leadership roles, most coaches also attributed their current CIS position to a progression that began with coaching other sports or coaching cross-country running at a different level. Five coaches held positions before working at the CIS, while one made the jump directly to the CIS with no prior coaching experience.

> I coached at the club level before getting a position in CIS. I was all over the city, mostly training runners who were interested in competing at the collegiate level once they reached university. It wasn't my full time job but I really enjoyed the work ethic that the club level brought. At that time, I also had the opportunity to coach runners who made junior national and international competitions. I was very lucky to have these experiences before jumping into full time coaching. (C2)

Coach Knowledge Acquisition

This property contained 13 meaning units and provided information about coaches' education, including formal and non-formal training. Five of the coaches in this study discussed how they accumulated the majority of their knowledge over the years. The most common topic in this category was formal coaching education, which included coaching certifications and diplomas:

> My formal coaching education was all intensive, right at the start. I had taken one coaching course in my life before I started coaching. After I was offered the CIS job, I started taking any kind of coaching course I could find. In one year, I did my NCCP levels I, II, and most of my level III. A few years later I received a diploma from the NCI program in Halifax, and I truly believe that's where things really started to take off. I was very fortunate to be able to have this experience and I feel as thought this was a pivotal point in my coaching experience. (C6)

> I've taken courses and have my level 3 in the old system. I have some level 4 courses but I've gotten a little frustrated with the evolution of the certification process so I stopped. But who knows, I may take it up again at some point. I found that the NCCP program is helpful for many coaches up to a certain point, and then it becomes redundant. But I'm happy with what I do, working with university athletes. (C2)

Another area that emerged was the experiences they had learning from other coaches. Of the two participants who discussed this topic, each one recalled having positive mentors very early in their coaching careers. They credit their current knowledge to these learning experiences and individuals, as shown in the following quotes:

> I did, what now seems incredibly old school, but if I heard of a coach that I thought was pretty decent, I would pick up the phone, call, and say: "hey, I have a few questions for you, can you spare half an hour?" In general I found people to be close-minded because at the time, it was a much more secretive environment. But I also found some people who were incredibly open-minded about it as well. I ran into one of these coaches later at a national championship and he pulled me aside and actually took the time to sit down and talk to me. He was at the top of the mountain and I was just starting out, so that was an important message to me because he took me seriously. (C4)

> I learned a reasonable amount during the NCI program but I was mostly during lunch times and dinner times where we would all get together, that I really started to learn how to handle a team. There were many of the coaches in the program, none of which were track and field or cross-country coaches, but most were some of the best and most established coaches in the country. I learned many important little things like how to get your team on the bus on time. Little tricks that other coaches used in the past really helped my teams develop cohesion. (C6)

Coach Make-up

Whereas the previous property highlighted the different educational paths taken by the coach, the following property focuses on the coaches' individual make-up that guided their careers. For example, the coaches provided information about who they are and their reasons for coaching cross-country running. Furthermore, they placed particular emphasis on their personalities specifically pertaining to their general knowledge about coaching. This property was the largest within its category and contained 76 meaning units.

Four of the six coaches touched on their reasons for becoming a coach, particularly in the sport of cross-country running:

> Truthfully, I think it's the humanity of sport that's intriguing and definitely one of the reasons why I got into coaching in the first place. (C4)

> The process of teaching and coaching is an educational one, for the teacher and the student. It's dynamic, and not a simple one-dimensional thing where you are giving them something and losing something. And I absolutely love that about coaching. I often say that I learn more from my athletes than they will ever learn from me, and I mean it. (C3)

> I've been such an advocate against coaches who want to classify cross-country running as an individual sport. In fact, I would even argue that it is one of the truest team sports there is. In basketball, I can have two guys on the court who can't shoot or pass, and the team will still do well. In cross-country, all five team members have to cross the line and I have to use their scores, good or bad. So when you dissect it, the team is even more essential than so-called "interacting sports" and that's the main reason why I chose to coach it. It's a challenge and so much fun. (C5)

Although the journey of knowledge acquisition was different for each coach, it was interesting to note that many common themes emerged regarding their leadership qualities and general thoughts and beliefs of coaching. For instance, all coaches acknowledged the importance of having an active role in team leadership by making decisions that represent the team's best interest. These similarities are discussed in the following quotes:

> If you're always dictating to your team, they will become reluctant and you're not going to get the most out of them because they will resent you. The bottom line is if they're not happy campers, they won't be good performers. As a coach you have to be diplomatic about certain things and allow the team to have their say. (C2)

> Sometimes it's more efficient if I take the information and say "we're competing in this race, three weeks from today". There's no need to be democratic about it all the time. Some parts of coaching, particularly at this level will be benevolently dictatorial otherwise certain things will never get done.(C4)

On the other hand, coaches also believed that an important component to being a good leader was taking a step back and providing the athletes with freedom, particularly in the development of cohesion. This is expressed in the following quotes:

> I find, for the most part in universities, athletes are able to bond with each other fairly easily. In those cases, it's very important that the coach does not get in the way of that natural progression. I do this by not controlling all aspects of the athlete and team development. Let the athletes be who they are and good things will happen. Things like cohesion will usually develop on their own, if not, then it's time for me to step in and be a leader. (C5)

> I don't want to get into a position where I'm deciding whether or not they should spend time together. However I will make an executive decision on things like hazing and issues of peer pressure. But most of the time it's a matter of talking to your team leaders and telling them what is expected. But the key thing is to allow the athletes to self police themselves. They usually make the right decisions. (C6)

According to the participants, an important component to successful coaching in the CIS was having a positive professional and social relationship with their athletes.

Specifically, coaches noted that conversations and frequent interactions with their athletes were key in this case. This is apparent in the following quotations:

> Every day, when I arrive at practice, I try and look everyone in the eye and say "hi (name), how are you?" Every person. I don't say "hi gang", I say "hi John, how are you? How's your knee?" And I walk around the room and talk to everybody, personally. I start every practice that way because it's important for them to see me as an approachable person who cares. I can't just be a guy holding a stopwatch, there's so much more to coaching than that. (C3)

> I make a legitimate effort to speak to every member of the team as often as possible, but it's hard with so many people. I'll usually pull someone after practice or roam the bus when we are traveling together. I make sure that I develop a personal relationship with every individual person. That's just common sense as a coach. And it's more than just knowing their names, it's all about your interactions with them on a regular basis. (C1)

In addition, as the following quote explains, coaches also noted that while a positive relationship with their athletes is important, there exists a fine line between being a coach and a friend:

> There's a balance I need to have that includes a bit of authority and being a friend. I'm not socializing with the team, going to movies or for drinks because I have my own life and I need them to see me as someone they can trust. However, I also want them to see me as a real person and that I understand their struggles, so sometimes I might join them for lunch or listen to their boy/girlfriend problems. That's an important part of coaching. (C4)

Finally, while having positive relationships with their athletes was of great importance to the participants, coaches also expressed added gratification in continuing relationships with their athletes post-career:

> I often get phone calls years after a runner has graduated inviting me to weddings, christenings, or any other major event in their lives. That's special. I take a lot of pride in knowing that most of the athletes that came through here want me to be part of their lives 10-15 years down the road. (C5)

> My wife and I are, on average, attending 5 weddings a year of athletes that have come through here, it's awesome! What a brilliant thing that someone came through here and was running and it wasn't just about running. And later on,

> when there's something important that happens in their lives, they want you to be a part of it. I've also held babies of people I've coached. It's a very special feeling. (C4)

Athlete Personality and Characteristics

The second higher-order category, *athlete personality and characteristics,* included 126 meaning units and represented 23% of the total data analyzed. While the previous category pertained to the personality and experiences of the coach, the current category was concerned with characteristics that were specific to cross-country running athletes. More specifically, this category described the athletes' personal attributes, ranging from aspects of their personality to specific psychological characteristics, including leadership skills from the perspective of the coaches.

Athlete Make-up

This property was concerned with coaches' perceptions of University athletes, including who they are and what they do. More specifically, coaches discussed the characteristics they felt were vital for University athletes and for the development of team cohesion within a cross-country running team. This property was the second largest with 45 meaning units, in part because the responses pertained to key questions asked in the interviews (e.g., when choosing a runner for your team, what are the main qualities you look for?).

While it must be stated that each coach likely had their own set of characteristics and qualities they looked for in their athletes, several common themes emerged. For instance, five of the six coaches discussed the importance of physical ability and talent when recruiting or considering an athlete to join the team. More specifically, they felt an athletes' physical ability was the most important characteristic:

> Physical ability is generally the first thing that stands out when I'm recruiting a runner. We do a lot of recruiting here and that was one of the things that I knew we would do when I moved here. If I'm going to do this, I'm going to do it right and we're going to recruit hardcore. I think a lot of schools, particularly when it comes to cross-country running, haven't done that. And physical ability is something that you can quantify. Once we've established how good a runner is, we can start looking for other characteristics. Let's be honest here, fast runners win races. (C4)

> When recruiting an athlete, I initially look for talent, which is the first thing any coach will look for because you don't know their personality from the get-go. So physical ability is the first thing that stands out and then you're able to look deeper, and if you're lucky, you get someone who has a wonderful personality that goes along with the talent. (C5)

While physical ability is an important quality for an incoming athlete, coaches also emphasized the importance of other factors, such as social skills and potential for personal growth and development. Here, coaches discussed the importance of fitting in, but also having the ability to grow as an individual and improve the team atmosphere:

> Recruits usually come here, visit the team and interact with the team; and that doesn't mean that they have to be socially gregarious and a loud mouth, but I can usually tell whether someone will fit in. You want someone who is going to be able to sit down at the table and talk, and take a genuine interest in us as well. We're constantly building our team, so it's important that my athletes get along. (C4)

> It's very important for each athlete to fit into the team but it depends on the group. Most student athletes are good people. They are bright, motivated, organized, energetic… They have high goals but they also want to have fun. A big part of life is fun. We want people who can sit and talk. Not necessarily be the life of the party, but someone who won't struggle with the crowd. (C5)

In addition to athletes' social skills, two coaches discussed the importance of community involvement. These coaches believed it was important that their athletes were seen as active members of the community by volunteering at various community events and charity programs:

> We want people that are going to be part of a community and not just the team. We do a lot of volunteerism here, it's strongly encouraged. We run a number of community outreach programs. A number of our athletes are members of the "run and read" program where they combine literacy and athletes in a number of elementary schools and a few other programs as well. So that's citizenship and for me, that's important. I highly promote that to my runners. (C4)

> My philosophy of life is very simple. If you're born in Canada, you've won the lottery, appreciate that. Secondly, if you're healthy enough and able to enough to run at the high level, then you're even more privileged. Having said that, I usually ask that my runners give back to the community on some level. It could range from coaching a junior high school program or working in a soup kitchen. In the end, I develop people, not runners. And someone who wants to run for me has to see the benefit in helping others. (C3)

Finally, several coaches discussed the many characteristics of coaching university level athletes. This included understanding the struggles of student-athletes such as balancing academics, athletics, and their social lives. In particular, coaches suggested that student-athletes needed to have a particular makeup in order to succeed at this level of competition:

> As a student-athlete, you'll likely have a few academic conflicts over the years. Our policy is that you have to be a good student way before you can ever be a good athlete. We promote that kind of thinking in our runners and I believe most of them come here because they think that way as well. Basically, if someone came to us and said that he's willing to sacrifice his schoolwork for the team, we'd have a little chat with him. We're an educational institution and we need to promote this to them. (C5)

> Being a student-athlete is all about making choices and finding a healthy balance. I believe they have to focus on 4 things. 1- academics, which I think should be primary. 2- athletics, which is secondary if you plan to be a top competitor. 3- social, which I think is important but ultimately that's up to you to figure out how much time you want to dedicate to your friends, lovers, hobbies. And 4- a job, but I try and discourage that because I believe everyone can do 3 things well, not 4. If you're doing 4, one will suffer greatly. (C3)

Athlete Psychological Characteristics

This property accounted for the psychological characteristics associated with collegiate cross-country runners. While the previous property discussed the qualities and

characteristics that made athletes who they are, the current property examined coaches' perception of their athletes on becoming a successful runner.

As previously mentioned, many coaches believed that incoming athletes needed much more than physical ability in order to achieve success at the collegiate level. While physical ability was credited as the most important factor for incoming athletes, three of the six coaches also emphasized the importance of work ethic and/or discipline:

> Once we've established that an individual can run, then we begin looking for some other characteristics. We call it "driving the engine". I've coached kids in the past with big V8 engines, but no one behind the wheel. In other words, these are athletes with all the talent in the world and no work ethic. They aren't able to do what needs to be done in order to reach their potential. I have a serious problem with that. I would rather a less skilled athlete with greater work ethic. (C2)

> My most memorable athletes were not those who won the most national titles, they were the ones who achieved something beyond "winning". I remember those who went from worst to best on the team because they never gave up. I remember those who showed up every day and ran their hearts out for the school and for their teammates. (C3)

Often associated with discipline and work ethic was the notion of mental toughness. Throughout the study, coaches consistently suggested that mental toughness was an integral part of being a successful cross-country runner. These views are further explored in the following quotes:

> There's so much to be said in sport about balls. And you can't always quantify that. Some athletes are lacking the emotional and intellectual profile that can make them very successful runners. Some athletes come into their collegiate careers mentally weak and lazy because they've never had to work at it. This all falls under the giant umbrella of their psychological profile. We try and assess this before they come in but it's very difficult. (C4)

> When a runner is on the start line near the end of the season, they've done everything they can possibly do in order to prepare for the race. They know the course and they are physically as ready as they'll ever be. The only thing that is going to stop them is nervous tension. If a person isn't mentally tough and isn't able to handle the pressure, that's the only thing that will hurt them. (C6)

In addition, coaches also talked about specific qualities that were important in cross-country running. While discipline and hard work were crucial to success, coaches also noted that determination was a key ingredient in the sport, stating that a motivating force must drive athletes whether intrinsic or extrinsic:

> As long as you're enthusiastic, motivated, and enjoy the journey, which most of my athletes do, it's a very positive experience. Not everyone can win every race, but each runner has to keep going. The old saying "the journey is more important than the destination" is 100% accurate in this sport. Runners must find something that pushes them to continue. (C5)

> I don't care how they motivate themselves, as long as they do it. When I ran, I would create a "race within a race" always competing against someone, pretending it was for a gold medal. Once I passed them, I would move on to the next one. I know my athletes don't run like that, and that's okay, everyone has to find their own driving force to keep going. It's almost like momentum. (C6)

Finally, one coach expressed that truly successful athletes were not those who win, but were those who believed in a selfless concern for the well-being of others. Specifically, the coach believed that in team sports, promoting altruism should be part of any training program:

> I think it's a gift to be able to go through a time in life where you can see that unifying element of a team, country, or community. Because that's the stuff you can carry with you wherever you go, that sense of altruism. So if someone can graduate from here and have an experience with our team, where the focus wasn't about winning a title and just being a unit, it was about finding a home and being altruistic and finding those social elements about being a person, I think they're better off. As a coach, if you promote altruistic beliefs, and are pretty good technically, along the way, you actually win quite a bit, and not just the all-cheesy "we're all winners at heart" type stuff, you actually win national titles. (C4)

Athlete Leadership

This property pertained to coaches' expectations of athlete leaders, as well as key elements that defined strong athlete leaders. This property was the largest, containing 46

meaning units, which is somewhat surprising since the interview guide did not specifically address athlete leadership.

Four of the six coaches discussed the importance of athlete leadership in cross-country running, and they all felt that team leaders, such as team captains, were an extension of the coaching staff. They felt that fitting with the coaches' identity was essential to formal and informal leadership:

> I run a group of captains that are peer selected, and I meet with them once or twice a week. I'm able to give them information and also get information from them in a slightly different format. That way I have information coming in that I normally wouldn't get. Not in a sneaky way, I just don't expect my team to tell me everything, but it's important that I'm in loop for most things, in case something happens. (C4)

> I allow the team to elect the captains every year. I usually have a pretty good idea who it will be and I'm usually right. If I dictate who it's going to be, the team won't respond to the captain all that well. If it's their decision, then they are more likely to respond to them. The captains set the tone so it's something that I take very seriously and manipulate to make sure the team flows the way it shows. (C5)

One coach revealed that team leaders were especially important for the integration of new athletes to the team, particularly for more reserved first-year university students:

> There are always people who are loners on the team and this is particularly the case with rookies. This is most likely their first experience outside their hometown so it can be scary for them. That's where the captains come in. Part of their job, as their extension from me, is to integrate these runners and make them feel as if they are part of a team, a family. They'll set them up with rides, tutors, library cards, anything that makes their lives easier. (C2)

Similarly, all coaches who discussed leadership agreed that team leaders, particularly captains, should possess certain characteristics that other team members may not have. Specifically, captains were typically senior members of the team who understand how the team is run. However, as the following quotes will describe, being a leader involves much more than experience:

> Typically, leaders are senior runners, someone who has a long relationship with me and is able to convey messages to the team when I'm not there. And it also has to be someone who the team can trust. If it's not, game over. Trust is one of the main factors in cross-country, particularly when we're talking about captains. (C1)

> Captains are generally a bit older and have been around for a longer period of time so the level of trust is fairly high from both the coaching staff and the rest of the team. My sense is that they feel more comfortable being critical to me and, in a sense, it's easier for me to get information to them that they can filter out through their perspective whether in the locker room or out on the trails. (C4)

In addition, one coach mentioned that an effective leader must be someone that the rest of the team can look up to and mimic:

> I have one girl in particular on my team who has talent, work ethic, and the competitive spirit. That's what you want. When I'm looking for a leader, and "what makes a leader", that's it. In my eyes, she's able to talk the talk and walk the walk. No one can ever dispute her work ethic during practice or competition and she can back it up as well. So kids on the team look up to her. (C2

Coaches even relied heavily on coaches to perform certain task duties in their absence:

> For the most part, I can stay on top of them and provide immediate feedback but a lot of our program is based on putting in a good bit of mileage on our trail system. So there's a reasonable amount of time when they're out there running and I'm not on them. I might take my mountain bike and follow every now and again, but if I don't, I rely heavily on my leaders to push the others and possibly even provide them with feedback and positive reinforcement. They usually report to me afterwards and we talk about it, not in a sneaky way, but just so I know what's happening with my team. (C2)

While several characteristics were found to be important in athlete leaders, four participants believed physical ability was the catalyst to effective leadership. This notion was expressed in the following quotes:

> I certainly think that in our environment, we've had cases where the captain is the best athlete on the team, which is tradition in most sports, because they often make fantastic leader and are easy to look-up to. So I think the direct correlation with physical ability is an overtness that implies leadership, but it's not always there and it doesn't always influence the team the way you want. (C4)

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> Typically the athletes who come in with some serious running ability are able to command a certain amount of respect from the rest of the team. People just gravitate to those people. Think back to Wayne Gretzky or Michael Jordan, they had to learn to become great leaders because people automatically followed. (C5)

Finally, four of the six participants discussed the importance of athlete leaders in the development of cohesion. Specifically, coaches revealed the leaders are an integral part of its development as they are typically the ones who will set the tone in the coach's absence:

> Leaders make an impact socially and that's a big part of our team. We're all social animals. Very few of us like to sit alone in the dark and stare at the wall. We all like social interactions and university is no different than high school. People are always looking for social stimulation. Leaders usually take charge in organizing team activities such as movie nights etc. I ask that they take over that stuff rather that me. Captains can have a huge impact on the development of cohesion because they're "one of the group". (C2)

> Team leaders will play a role in developing the team because they're essentially the face of the team. They have a strong influence on all aspects of development, not simply cohesion, but certainly cohesion. Everything that goes on between these walls is impacted by the leaders and captains. Whether it's organizing team dinners, social nights, sports games, etc. (C5)

Team Development

The final higher-order category of *team development* included 268 meaning units and represented 50% of the total data. This category pertained to the information on coaches' organizational skills that began at training camp and continued throughout the season. Furthermore, it included how they coached during the season, including methods of individual and team development.

Goals

This property discussed the process of establishing and monitoring both team and individual goals for cross-country running athletes. More specifically, coaches discussed the importance of goal setting, particularly as a component to developing cohesion.

Although each participant discussed goals on some level, it is important to note that some coaches had contrasting views regarding their general thoughts and beliefs of goal setting. Most coaches believed that goals were essential to individual and team development, as expressed in the following quotes:

> I believe that setting goals is a large part of who we are and it's a very positive thing to do as a team. Sometimes it's good to just sit down, talk, and have everyone on the same page. It's a great thing to do early in the season and to revisit throughout the season. (C2)

> Common goals are a good way to motivate the athletes, but they have to be realistic. If we set our team goal at winning a national title and we don't have the team to do it, then we're setting ourselves up for disappointment. All together, goals can bring people together as a group. So I like them and I believe that it's a positive experience for any team. (C5)

In contrast, one coach believed that goals were limiting and should not be included in either athlete or team development:

> I don't believe in goals, I'm not a big goal person. I believe they are limiting and frustrating. That doesn't mean that we don't have standards. There's a difference between a standard and a goal. I don't even like the word "win", it's too narrow. I use things that go around it as much as possible (e.g., performing as well as you can) but winning is dealing with things that you don't necessarily control. When you deal with things you can't control, you're putting yourself pressure on yourself. I rather define things based on what my runners can control and let the chips fall. Goals often incorporate external factors and I don't like that. In the end, it may end up being damaging to the team. (C3)

Furthermore, five of the six coaches believed that goal setting was a practical and useful activity for the team, as well as the individual. These coaches believed that while

setting both individual and team goals were an important part of the coaching process, team goals were typically more important due to their implications on team cohesion:

> I think it's important to have common objectives for the team. I think it brings them together; it's something they can all strive for together and at the same time. If they're all on the same page, then I find they're more likely to get motivated and work hard towards the goal and probably have a better sense of community and togetherness while they're doing it. (C5)

> I sit down with my athletes early in the season (and throughout the season) and help them set their goals. I do this because I like to know what they think they're capable of and what their ambitions are. Most of the individual goals we set are cross-country related but I also ask them to set life goals as well. This is done to remind them that they're students, and people in society. Life shouldn't only be about running. That's such a small part. But goals are a very effective way for them to watch themselves grow and reach objectives. (C2)

Monitoring goals was also important. Five of the six coaches discussed the importance of monitoring goals throughout the season, both formally and informally:

> I do weekly logbook submissions, electronically. It's pretty laid out and involves what you did every day during the week. I give them the training but I want feedback on it and it can be really quick. Every Monday they send me their submissions, unless we've assessed that you're in a place where, psychologically, a logbook is unhealthy. These logs have been refined over time because I realized that some of them weren't being that specific (healthy status, injury). Not that they were trying to hide anything but it may be that they have a tight hamstring and aren't upfront about it. (C4)

> I usually meet with them in order to keep track of their progress. Once we have determined their individual goals, I like to make sure that they are being met. This is for their own benefit. So typically I will meet with each of my runners and we'll examine where they are physically and mentally. Most of the time we have to adjust goals because of some contextual factors. (C1)

Finally, three coaches recommend that athletes not only shared their goals with the coach, but also with their teammates as a method of support:

> There's always a gap between potential and performance. You never know what people can achieve if they have the right attitude. That usually comes down to whether or not they have the support from their team, family, and coaches. I usually recommend that my runners tell other people what their objectives are. That way, their teammates will be there if they need it. (C3)

> Each individual also needs to share goals with one another because that hangs it out there and you're a cannibal. It doesn't have to be with a microphone in front of your face but sharing them with the team becomes important. I believe it adds to the support you'll receive for those tasks. You don't immediately have to tell the team every goal you want to achieve as an athlete, but if you can't tell them a few, then there's a problem. (C4)

Coach Tasks and Responsibilities

This property described the organizational aspect of coaching that began with pre-season planning and preparations that directly influenced coaching during practices and competitions throughout the entire season. More specifically, coaches described their responsibilities related to coaching athletes at the elite level.

All participants openly discussed their specific tasks related to pre-season preparations, including time spent planning during the off-season. Coaches agreed that pre-season preparations differed every season depending on their athletes and other contextual circumstances. However, some of it was routine and stayed relatively stable over time:

> We prepare by doing several things. First, you have to find the right people. Then you have to get them out there and make them a team. We plan our season once we have an idea of who we have. There is no formula that will allow any coach to guarantee victory because every person is different and reacts differently to you're coaching style. So planning a season is an on-going process. Of course we organize certain things before anything starts, but nothing is ever set in stone. (C3)

> I don't think there's a formulaic routine to pre-season preparation. There are certainly technical elements to it, and for me, it involves an analysis of our team's physical capabilities and what the competition is going to be like. That's a fairly traditional outlook, but I have to do it. It's a pretty standard coaching routine for everyone. But for me, there's a general "routine" that changes slightly and sometimes differs, if that makes any sense. The collective personality of the team is never the same but in the end, it's still a cross-country team, which means there's an element of consistency. (C4)

Some coaches discussed their specific tasks during the off-season that involved meeting with the coaching staff and establishing a competition schedule for the upcoming season. These coach meetings often began as soon as the previous season ended to discuss ways to improve. Some coaches revealed there is never an "off-season" in the sport:

> Realistically, there is no off-season in cross-country. We have weekly coaches meetings and we will go through our varsity runners and make sure that the right messages were going out for every individual. Here we're able to discuss what works and doesn't work for each athlete. And that's important because no two athletes train the same. Everything is generally decided and planned for the following season during these weekly coaches meetings in the summer. We're also able to brainstorm and determine what meets we're going to participate in etc. (C6)

> At the end of each season, we discuss how they think the season went for them individually and with the team. It's important to look back and evaluate yourself and see if there's anything you would have done differently, so you can prepare for the upcoming season. Evaluating the past season is always important when you're planning the next one. I will often see areas where we can change and improve, but more importantly, so do the athletes. (C5)

As an extension to pre-season preparations, all participants discussed the recruiting process. Recruiting involved finding prospective runners for the upcoming season and was identified as an essential part of pre-season planning and involved many different important factors:

> There's more to recruiting than just talent, there are many things AFTER talent that you need in order to be on this team. We've recruited people for their leadership capabilities and work ethic. We have NOT recruited people because they were assholes. We have to look at how it will affect the team. (C3)

> The recruiting process is an ongoing process. In the spring, a lot of the athletes have made up their minds about where they're going. Therefore, there's an element of planning that comes along with preparing people for what's coming. We need to provide them with expectations regarding lifestyle, school, living, etc. (C2)

Recruiting also involved a certain personal element to be effective. Specifically, coaches discussed that they often traveled in order to meet the athlete and their family in order to ensure that they were making the right choice. Coaches believed that recruiting was a balancing act that involved a mutual connection between the athlete, the coach, the parents, and the school:

> There are a lot of ingredients involved with getting the "ideal" runner. And while we're recruiting someone, we try to spend personal time with them. We visit them to show that we care about them, that they're more than just a runner. We also, we want to make sure that our program is the right fit for them. If not, then we'll end up wasting a valuable time and resources on them. I've told many gifted runners that they should go elsewhere because they would be unhappy here. We have to remember the team aspect of the sport when we're recruiting. (C5)

> If we're looking at a top recruit, someone who will make a significant impact, on the team's ability, we always make a strong effort to go and visit him or her. We want to meet with their parents and make sure that the parents think it's a good idea, they're aware of our strengths and weaknesses and know what they're getting themselves into. All of this gives us a feel for who that person is. (C6)

Coaches also consistently cited that an important part of preparing for the upcoming season was organizing a training camp for their team. Participants revealed that training camps were a staple in any teams development for a number of reasons, including physical training, general orientation, and administrative duties:

> We normally have a training camp, get a lot of things out of the way in the long weekend in September. It consists of going to a location outside the city and escaping everything that's associated with school and other people. I always run a small orientation for the rookies and cover a lot of the basics. It's also a good time for me to get a lot of the paperwork out of the way because I have everyone in one place. (C2)

While these were key aspects of running a training camp, the most common benefit discussed by the participant was the development of cohesion during training camp:

> You are introduced to other dimensions of your teammates at camp. Everyone will assume that you're there because you're a runner, but they may also find out that you're a computer wiz or a fan of horror movies, and that's important to the development of the team. Camp is meant to develop the team on a different level. Forget about running, you're all runners. You learn who has good books and who's in the same program as you. Any team needs to start off like that. (C3)

> We do 7am sessions every day of camp and during the first 48 hours, we'll go really hard. I suppose it's similar to the military concept where they're trying to build you up as a unit, so the first thing they do is break you down. I get them tired and they sweat together and hurt together. They go HARD, and when they're tired, I ask them to get up and do more. But part of that is to create this commonality of effort that they're all doing. You'd be surprised how well it works. (C4)

Once the season had begun, coaches discussed that they took on a different set of responsibilities that involved structuring practices and implementing different coaching tactics:

> I'm often studying how other runners run. I also have to be able to come back to my team and say "so-and-so from UBC runs like this, and he really attacks the hills late in the race, so this is how I think we can take him". As a coach I have to do my homework. It's like watching tape in football. I also have to be out there on the course and be able to speak to my runners and say "X" and they know that means they have to execute behaviour Y. (C4)

> I have guys training with girls depending on their ability. I train them on ability levels as opposed to gender. Sometimes our top girls can keep up with some of our guys. Why not integrate them. They're all wearing the same jersey. Smart training involves running with people who are similar ability levels, who cares what gender they are? (C2)

In addition to these coaching tactics, many coaches had adopted training strategies that were ultimately structured to develop the team, as well as help with the physical aspect of running:

> Sometimes we do loops where individuals who run a like will run together, there's no avoiding that. But in order to counteract this, we sandwich the sessions. They will warm up as a group at the beginning of the practice and they'll finish by doing strides as a group at the end. The important thing is that everyone is back together again. We try to get as much "together-time" as possible. Obviously there are differences in ability on our team. There's quite a considerable

> difference between our fastest male and our slowest female, so it's the coach's job to make sure they interact, regardless of this difference. It's not always easy. (C3)

> We want to win the competition, not the practice. There's no sense killing yourself to win the workout. But I expect them to treat every workout seriously, as a preparation. I sometimes recommend that they share the workload. I will ask the weaker runners to lead the interval once in a while so they're not always hanging on the back of the group. This is ultimately good for the individual and the team's morale. (C1)

Finally, these coaching strategies also extended to the competitive environment. Five of the six coaches discussed team strategies used in competition in order to yield the best possible team result. This involved a great amount of teamwork such as keywords, hand signals, and other team strategies:

> When they get on the course, they're trying to beat one another, and that's fine, But you have to also have that sense of teamship when you're racing. For example, if you're running alongside a teammate and you're trying to take over another school on a hill, both runners have to be in sync with one another to take full advantage. So there are team tactics during races. Our stronger runners may also try and sucker an opponent early so that they'll eventually die down. We talk about that during practices and absolutely work it into competition. (C2)

> We absolutely set things up technically, and that goes back to the strategic element of cross-country where we do team stuff. We have key words that are short and fast, and hand signals that mean a number of things to promote communication between teammates. We use interaction all the time in races but before you get to that technical element in the field of play, we have to get you to the overall team space emotionally. Without the trust, team interactions are completely useless. (C4)

While using motivational and team tactics during competitions, coaches noted that athletes should not prioritize them over individual success:

> I always tell my runners that if ever they come up to a teammate during a race, they should always say "come on, finish strong with me". Those are the types of things I mean when I describe this as a team sport. WE use strategy when possible. It's not just every man for himself out there. We want to help one another, but not at your own peril. I don't expect my 1st runner to stick with my 8th runner, because that will hurt the 1st guy. But that doesn't mean that they can't help each other out for a period of time during the race. (C5)

Developing the Team Environment

This property included season-long strategies used by the coaches to cultivate the environmental aspects of the team. It was the property most often discussed by the participants with a total of 135 meaning units. The property alone accounted for over 25% of the total analyzed data. It also involved various topics pertaining to team development such as intrateam competition and the relationship between teammates.

Essential to team development was the notion of cohesion. All six coaches discussed cohesion during their interview, often providing their viewpoint on the overall nature and development of cohesion:

> I can't dictate how much time they spend with each other outside the team environment, I don't need to tell them what to do. I know they can organize things by themselves and that's the whole notion of the cohesiveness. You can't tell them what to do. If they like each other, they get together and that's usually what happens. A lot of them live together or are in similar programs in school. So there are often study groups, team nights, movie nights, etc. All sorts of things that are not up to me. I leave them to that, and in my experience, they have done a very good job to include everyone. (C1)

> Cohesion just happens. I don't make recommendations on how much time they should spend together outside of team functions. Some live together, so they spend a lot of time together. Every year there's a "track-house" where a lot of the runners live as roommates. It's generally close to campus so there are always people dropping in for movie night or study sessions. I make no effort to control that. However, during official team-time, then I'm in control and if I see something isn't right, I'll interject. But in my experience, cohesion is something that develops on its own. (C3)

While each coach had similar thoughts and beliefs regarding the nature of cohesion in cross-country running, there were even more similarities regarding views on the importance of cohesion. All six participants agreed that cohesion was a crucial component to the sport, particularly at this level of competition, often suggesting that lack of cohesion could be detrimental to the team's success:

> Cohesion has to happen. Tactically and strategically, it makes it more effective as a team to be cohesive and there's that degree of intimacy and trust that you have to have in elite level athletics. Without cohesion, it's basically a group of strangers running at the same time. It's just not effective. (C4)

> Cohesion is important because there's a certain amount of pain that is involved with cross-country. During the year, you've gone out and worked really hard with other people, and you've hurt together on the same hills and during the same intervals. You've also shared successes and heartbreaks with them. When you get out there on the race course, look over and see them suffering just as much as you, it makes it that much easier to finish strong, and to do it together. (C6)

> Cohesion is very important in a cross-country team, no question, even given the dynamic of the sport. They all help each other, they all support each other, they all cheer for one another. I've been around the sport long enough to see athletes perform better when they have a network of friends backing them up. They all compete with each other and hopefully they're all friends when they walk off the course, in fact, I know they are. (C2)

Another outcome of cohesive teams was related to the team's ability to enjoy themselves while participating in the sport. Five of the six coaches suggested that cohesion not only helped the team perform better, but provided them with a more enjoyable atmosphere to train and compete:

> Showing up at practice is a lot easier when you like the people that show up with you. It's hard for most student-athletes to make 7am practices. But if they know their buddies are going to be there and they're going to laugh for most of it, then it's provides them with some incentive. Imagine waking up for an early morning run with 25 people you hate. No one wants that. (C3)

Despite its importance, cohesion was not always an easy objective to achieve. Coaches noted overcoming intrateam competition was critical to the development of a positive team atmosphere:

> I've got some people who hate competition and some people that are way too competitive during practice. Anytime they get on the line, they seem to think that they have to beat the person next to them. Eventually, it hurts the team, and there's no comradeship or trust. They race and they race, and when you ask them to race, they can't, or won't race! They're emotionally burnt out. (C2)

> Of course I want each individual to have a competitive edge, but I don't want them to burn each other every time they see each other on the course. That can be destructive to the individual and the team. I try and control when and where they are competitive. I have to be very aware of what goes on during practice. (C5)

> Intrateam competition will depend on how well the team gets along. Basically, if the team is more cohesive and can handle a little friendly competition, I'll suggest that they compete a little more during workouts for added motivation. But if the team is more hostile and not that cohesive, then I'll hold back on those workouts so I don't involuntarily promote more hostility. You have to know your team and play it by ear. (C6)

In order to counter intrateam competition, one coach recommended discussing intrateam competition during orientation early in the season:

> I typically prepare my athletes for intrateam competition. I always give a speech at the beginning of the year that discusses racing. If you're here to race every day, leave. If you can't race when you're supposed to, leave. It's all about finding the balance. Sometimes I want my runners to race in practice, depending on the workout. If that's going to motivate them, great! And I'll be the judge and I'll be the one who will stop it if it gets out of hand. But I'm very vocal about my feelings on the subject. (C2)

Coaches also discussed many other factors important to cross-country such as developing friendships and caring for teammates. While these were similar to the concept of cohesion mentioned earlier, here, coaches commented on the process of developing friendship between teammates:

> I think the most obvious thing about ability is that the people that are similar in ability become friends and a supportive force for each other. When you go for a run, it becomes very obvious who can run with who. Not everyone can run together for an hour and a half so you have to break up in sub groups. And people typically develop relationships with the individuals they're around most often. That's nature. So you're ability will pre-dispose you to friendships with certain people. (C3)

> After a really tough workout, they're all lying on the grass afterwards, holding their stomachs and panting. But they're all suffering together! I find suffering together helps them see each other on the same level and it allows them to develop a deeper appreciation for their teammates. Empathy is huge in this sport. My first and last runner may not be on the same competitive plane, but they train and suffer together, and in the end, they become close because of it. (C4)

Coaches also emphasized the importance of teammates supporting and caring for one another:

> If you take away the social support aspect of the team, you make it a hostile and competitive environment during practice, and you're going to struggle to get them to practice and train to their potential and fitness. So with the social aspect, they come out and not only do they get fit, but they get social time that's away from studying, assignments, midterms, etc. And it's positive social support. They're helping each other get better every day. (C3)

> You get to the point, after a little while, where it's no longer about going down to a meet and beating a bunch of other teams. Rather, what you do is contingent on how your friend performs and we need you to be friends. Maybe not best buddies, for life, you can't force that on anyone, but we need you to respect each other and interact. (C1)

Furthermore, coaches emphasized having fun. Specifically, three coaches said that promoting fun and an overall enjoyable atmosphere was a major aspect of their general coaching philosophy:

> The behaviours that we try and promote in our team are simple: work hard and have fun. We actually work very hard on that. We tell jokes, we laugh, we encourage them all to smile while they run. Having fun isn't just something that you can say in theory, you really have to work at it, it's part of our team environment. (C6)

> It's doesn't take very long, when you're on the line, to get the adrenaline going. If you've been training properly and focusing properly, it takes no time to get into the zone. If you're focusing an hour before a distance race, you're not going to be ready to race, you're going to be depleted. You're energy levels will be down because you're carrying too much tension and it's going to bring you down. So we consciously promote laughter. In fact, it became tradition for the captains to write down lists of jokes to tell before the race. Enjoying yourself is crucial to our team and to being a successful runner. (C3)

Ultimately, many of these factors are related to team atmosphere. All six participants provided detailed information on how individual athletes influenced the team atmosphere:

> Individual ability affects the team environment because, socially, everyone is really good friends with everyone else. The atmosphere is therefore not determined by how good an athlete is, but what kind of personality each athlete has. Sometimes the team environment will appear a little more positive if we're winning, but that is superficial. In reality, it goes much deeper than that. (C2)

> The team environment is something that I try to create from the very beginning. A lot of it has to do with how well the teammates get along with each other, but I also believe that the coach has a significant impact in it too. The more positive they feel about the team, the more likely they are to have fun and recruit other runners for the team. (C1)

> We try and create that supportive environment every day. This is why I start out every day and say hello to everyone and look them in the eye. So yes, we're going to try and run as well as we can but the total environment has to be one of joy. And if you really believe that, then all the little things you do, training camp, potluck, or encouraging people while they're down is contributing to the environment and atmosphere that you're trying to create. (C3)

Finally, coaches encourage the development of positive team atmosphere by encouraging social events:

> We encourage potlucks and team functions, in fact, we organize them! We have potlucks at my house all the time. We try to bring them together in any way we can. Often, after practice, we often see 5-10 team members standing around, chatting and planning study sessions, socials, movie nights, nights at the bar, etc. It puts the team in an environment where they don't necessarily have to "talk track". They can take advantage of the other things they have in common and really develop lasting friendships, and indirectly help their performances. (C3)

> Typically, many of the athletes will get together outside the formal environment, usually in the form of off day runs. But there's also team dinners and potlucks that are a huge part of our culture and environment. Those happen on a regular basis but I don't think I've ever made formal recommendations to the team about them. They just seem to happen because the team recognizes the benefits of such events. (C6)

Summary

The purpose of the current study was to investigate the experiences of University cross-country running coaches as it related to cohesion. The sample of participants purposefully included coaches with a minimum of 10 years of CIS (Canadian

Interuniversity Sport) coaching experience and a minimum of a level III coaching certification. Each coach in this sample provided significant insight into the practical knowledge of coaching cross-country running at the University level. Six cross-country running coaches were interviewed and an inductive analysis of the data revealed three higher-order categories, which were called *coach personality and experiences, athlete personality and characteristics,* and *team development.*

Coach personality and experiences provided information about the coaches' athletic and coaching background prior to becoming a CIS head coach. Specifically, coaches discussed their athletic careers, both as a runner and non-runner. All participants classified themselves as multi-sport athletes early in their careers, specializing in either cross-country running or track and field in high school. Furthermore, five of the coaches competed in track and field collegiately, and two were All-Canadians. In addition to their athletic careers, each participant discussed their journey of knowledge acquisition to becoming a CIS head coach. For some, this included coaching cross-country running at various levels such as junior high, high school, or club. For these coaches, the time spent in these coaching positions varied from three to thirteen years. Regardless of the time spent in each position, these participants felt they acquired valuable knowledge from these initial coaching experiences. Aside from learning from experiences, there was some consistency among the coaches regarding other sources of knowledge acquisition. For instance, two coaches acquired knowledge by conversing and observing other coaches early in their career, while all six coaches completed national coaching certifications.

There was also agreement between the coaches regarding their role as team leaders. For example, coaches acknowledged the importance of assuming leadership

while also providing the athletes with autonomy. Similarly, coaches also discussed the importance of having positive relationships with their athletes that often continued after the athletes career was over. Overall, it can be concluded that while the career path of each coach was unique, knowledge seemed to have been acquired in similar ways.

Athlete personality and characteristics explained the athlete's personal attributes. Coaches described the characteristics of an ideal recruit. Five of the coaches revealed that physical ability and talent were the first and most important characteristic for incoming athletes. However, all coaches admitted that while talent was an important part of the recruiting package, and winning races, incoming athletes had to show more than physical skill. Coaches revealed that athletes must possess several personality characteristics that went along with their physical ability such as strong work ethic, discipline, social skills, motivation, and mental toughness. Participants differed slightly on which of these were most important, however, all agreed that these characteristics were critical for incoming and current athletes. Several coaches also discussed the importance of volunteerism of their athletes. For example, these coaches encouraged their current athletes to become active members of their community and school by volunteering at local charity programs. Also included in this section were the expectations coaches had of athlete leaders. All coaches who discussed athlete leaders agreed that in addition to being good communicators and hard working members of the team, athlete leaders, both formal and informal, were an extension of the coaching staff. In other words, they felt that fitting the coaches' identity was essential to leadership and had the potential to become an integral part of in the development of cohesion as they are typically the ones who will set the tone in the coach's absence.

Team development included information on coaches' organizational skills that were carried out throughout the season and continued in the post-season, including methods of individual and team development. Coaches expressed their opinions on different coaching tactics and general coaching philosophies. For instance, five coaches discussed setting benchmarks throughout the season (both individual and team goals). This strategy often included rigorous monitoring (e.g., logbooks) and sharing individual goals with teammates. Furthermore, coaches discussed the importance of organization and the execution of their tasks during the off-season. These included recruiting, coaches meetings, and training camps. For example, while training camp was beneficial for fitness purposes, it was often cited as the catalyst for the development of team cohesion. Furthermore, all six participants discussed the many benefits of developing cohesion in cross-country running teams, which included better performances, increased motivation and work ethic, and a more enjoyable atmosphere. Cohesion also helped overcoming intrateam competition among athletes. Coaches agreed that teams with high levels of social support, trust, and controlled levels of intrateam competition were more easily coachable and likely to run better as a team.

Taken together, these three categories highlighted the experiences of expert cross-country running coaches as it pertained to team cohesion. *Coach personality and experiences* helped the reader understand the coaches' journey and knowledge acquisition that eventually led to the coaches' current position and general coaching philosophies. *Athlete personality and characteristics,* provided insight into cross-country runners. Finally, *team development* provided arguably the most pertinent information to the current study, highlighting the tasks and responsibilities of the coach along with their

thoughts and beliefs on cohesion in coacting sports. Interestingly, while each individual coach's journey was unique, common trends and beliefs emerged throughout the study. Most notably, similarities were found in the overall importance of cohesion within a coacting sport team.

CHAPTER 5

Discussion

The purpose of the current study was to investigate the experiences of University cross-country running coaches as it related to cohesion. Three higher order categories emerged from the data: *coach personality and experiences, athlete personality and characteristics,* and *team development.* The following chapter will discuss these categories as they pertain to the previous literature on expert coaches and the development of cohesion.

Coach Personality and Experiences

The higher-order category entitled *coach personality and experiences* pertained to the coaches' make-up as well as their individual progression to their current coaching positions. This section will begin by explaining several informal and formal learning experiences that helped shape their career. Following this, a discussion of the make-up of each coach will take place. Although each coach experienced a different career path and had individual personalities, several common themes emerged. These will be discussed with respect to previous empirical research on high-performance coaches.

Previous researchers examining coaching evolution have classified learning experiences into either *informal* or *formal* (Nelson, Cushion, & Potrac, 2006; Werthner & Trudel, 2006). Scholars have defined *informal* learning experiences as education that took place outside the standard school/classroom settings (Nelson et al., 2006; Werthner & Trudel, 2006). For instance, informal experience may include athletic involvement, self-directed learning, or any experience represented by unmediated learning situations (Nelson et al., 2006). In other words, informal experiences involved control over what the

individual chose to learn with little or no guidance from instructors or mentors (Nelson et al., 2006; Werthner & Trudel, 2006). Findings from the current study mirrored those of previous studies which found that expert coaches participated in a variety of informal learning experiences that assisted their career development (e.g., Carter & Bloom, 2009; Erickson, Côté, & Fraser-Thomas, 2007; Salmela, 1994; Schinke, Bloom, & Salmela, 1995). For example, previous research indicated that coaches progressed through a series of stages that included diverse participation in sports as an athlete and observing other coaches at the beginning of their coaching careers (Erickson et al., 2007; Schinke et al., 1995). Furthermore, these studies suggested that high-performance coaches typically participated in various team and individual sports at the recreational level. Current coaches also participated in a variety of sports, both recreationally and competitively, during their developmental years prior to becoming involved in cross-country running. They revealed that their past athletic experiences helped shape their philosophies and values because of their interactions and observations with previous coaches. The current coaches also noted that their enhanced ability and potential as competitive runners led to more focus in the sport and less attention to other sports. However, this did not occur until they reached high school due to few competitive running programs at the youth level. This ability to focus on competitive running in high school eventually led to decreased participation in other sports because of the possibility of running competitively at the collegiate level. Furthermore, the majority of current coaches went on to successful careers as collegiate runners with 4 receiving multiple All-Canadian awards and 2 receiving individual CIS gold medals. It is likely that their success and ability as

competitive runners encouraged their long-term interest in the sport and partially led to their successful coaching careers.

In addition to these informal experiences, the majority of current coaches reported a number of *formal* learning experiences. Nelson and colleagues (2006) defined formal learning experiences as training and developing coaches in a structured setting with the help of certified instructors. In other words, formal experiences may include coaching classes, clinics, or certification programs that are often required to coach high-performance athletes. All of the current coaches reported having a minimum Level III coaching certification, with two coaches having a Level IV in addition to a Diploma from the National Coaching Institute. Furthermore, three coaches pursued a post graduate degree in a sport related area such as physical education, biomechanics, or kinesiology, while the three other coaches' educational backgrounds varied from business, chemistry, and philosophy. The three coaches with sport-related education attributed very little of their knowledge acquisition and coaching philosophies to these experiences. Past research has noted that relatively few coaches believed that coaching clinics and sport education programs were useful in developing transferable coaching skills (Erickson et al., 2007; Nelson, et al., 2006; Schinke et al., 1995). Similarly, only two of the current coaches praised the effectiveness of formal coaching education in their knowledge acquisition and development. The fact that all coaches reported formal coaching education in their development might have been a reflection of how all CIS cross-country running coaches are required to have a minimum level of coaching certification. In fact, the majority of current coaches expressed frustration with the certification process leading most to obtain only the necessary certification allowing them to coach at their desired level. Those who

obtained higher certification had positive sentiments about the certification process. Although the relative importance of one type of learning situation over another can vary according to coaching contexts, the results of this study and previous research highlights the relatively low impact of traditional coaching education. These findings add to the existing belief that the examination of a broad range of experience is necessary in the development of high-performance coaches.

In addition to informal and formal learning experiences, current coaches described how their personal characteristics played a role in influencing their coaching careers. These characteristics referred to a feature or quality of their personality that heavily influenced their behaviours and subsequent thoughts and interactions with athletes (Bloom & Salmela, 2000; Côté, Salmela, Trudel, Baria, & Russell, 1995). Results revealed that although each coach possessed a unique set of characteristics, several commonalities emerged. For instance, the needs of their athletes varied from year to year, thus requiring them to adapt their coaching behaviours to meet these needs. Coaches revealed they often shifted from an autocratic to a democratic coaching style depending on the needs of their athletes and the time of the season. Specifically, the majority of coaches described an autocratic coaching style early in the season in order to set the tone, while shifting to a more democratic style as the season progressed. These findings are in accordance with previous findings of high performance coaches, which indicated that expert coaches adjusted their behaviours due to their ability to understand the needs and demands of their athletes (e.g., Carter & Bloom, 2009; Côté, Salmela, Trudel, et al., 1995; Csikszentmihalyi, Rathunde, & Whalen, 1993; Saury & Durand, 1998). Saury and

Durand suggested that coaches were flexible and anticipated adjustments throughout the season. In other words, coaches rarely operated on a fixed yearly organizational routine.

While coaches in the current study adjusted certain coaching behaviours throughout the season, other important characteristics emerged and remained consistent, such as having a positive relationship with their athletes. A number of recent studies have supported positive coach-athlete relationships in elite sports (e.g., Jowett & Chaundy, 2004; Jowett & Cockerill, 2002; Olympiou, Jowett, & Duda, 2006). For instance, Jowett and Chaundy suggested that coach-athlete relationships were underlined by mutual respect, care, open communication, shared knowledge, and understanding. Current coaches also emphasized knowing the athletes on a personal level as it led to more effective training and competitive atmospheres. Coaches may also have emphasized this type of open-communication because it allowed the athletes to see them as more approachable, friendly, and trustworthy. It appears that emotional closeness, as a salient aspect of the coach-athlete relationship, is consistent with other empirical research (e.g., Jowett & Meek, 2000; Poczwardowski, Barott, & Henschen, 2000). The present data also indicated that coaches developed friendships with their athletes and committed to emotional investments in their lives, often acting as their confidants. As a result, these feelings of trust may represent elements of an interpersonal relationship that are more meaningful and personal than a typical training relationship. Specifically, many participants revealed that two relationships (personal and training) developed and existed simultaneously with many of their athletes. In other words, it was important for the coaches to be seen as a real person as well as a trained professional. These findings were consistent with previous findings that revealed the importance of the “human side of

coaching" (i.e., Bloom & Salmela, 2000; Jowett & Cockerill, 2003; Lyle, 2002; Vallée & Bloom, 2005). However, while a personal relationship was important to the current coaches, they also highlighted the importance of maintaining the proper balance between being a coach and a friend, by knowing where to draw the line between the two. Overall, the findings of the current study have mirrored many of the previous findings on coach-athlete relationships by highlighting the importance of an approachable, trusting, and personal coach-athlete relationship. This improved individual relationships with their athletes and also increased the likelihood of a positive competitive and training atmosphere for the entire team.

In summary, this category highlighted the journey of knowledge acquisition taken by these coaches, from their earliest sport participation to their current coaching positions. While these journeys varied, a number of common themes emerged. In particular, coaches seemed to pass through a number of similar developmental stages outlined by several researchers (Erickson et al., 2007; Schinke et al., 1995). Given the differences in competitive athletic experiences (i.e., coacting versus interacting) it would seem reasonable to argue their developmental pattern would have differed substantially, but this was not the case. In fact, current coaches revealed that the majority of their early athletic participations were in various interacting sports, thus very similar to many of the previously researched elite coaching samples. The current coaches credited the majority of their knowledge acquisition to informal sources such as observing master coaches and self-directed learning rather than formal coaching education. Coaches also revealed the importance of several personal characteristics such as adaptability and their ability to shift coaching styles depending on the athletes' needs and time of season. Finally, the

current coaches highlighted the importance of a positive coach-athlete relationship that included mutual respect and open communication allowing the athletes to see them as approachable and trustworthy. The interpersonal relationships that coaches had with their athletes were believed to create a positive overall team climate leading to a more effective training and competitive atmosphere.

Athlete Personality and Characteristics

The higher order category *athlete personality and characteristics* pertained to coaches' perceptions of specific characteristics of their athletes, as well as the impact these characteristics had on the development of cohesion within a university cross-country running team. This category contained information that paralleled previous findings on athlete characteristics as well as literature on athlete leadership. Furthermore, this section provided an extension to the previous findings by incorporating the perspective of coacting sport coaches and their perceived influence of athlete characteristics on team cohesion. These areas will be addressed in this section, as well as previous coaching literature.

All coaches in the current study highlighted several important physical and psychological characteristics they looked for in their athletes. Although each coach emphasized different characteristics, several commonalities emerged. For instance, the majority of coaches revealed that physical ability was a very important characteristic for incoming runners due to the level of competition at the CIS level. Not surprisingly, this was consistent with previous research in elite endurance sports (e.g., Krustrup, Mohr, Ellingsgaard, & Bangsbo, 2005; Morgan, Baldini, & Martin, 1989). For example, Krustrup and colleagues suggested that endurance runners who were more physically fit

were more successful because they had a stronger foundation. Despite the importance of physical ability, the current coaches felt there were more than just physical characteristics that led to optimal success in cross-country running. In particular, coaches felt that psychological characteristics such as mental toughness, work ethic, determination, and leadership were equally as important. With respect to mental toughness, coaches felt it was necessary to help athletes adapt to the demands and pressures of intercollegiate sport. Similarly, Gould, Dieffenbach, and Moffett (2002) revealed that mental toughness and resiliency helped athletes cope with stressors both inside and outside of the sporting environment. Coaches also noted that athletes with a strong work ethic and determination were considerably more valuable to the team than those with only physical ability because they affected the behaviours of the other team members and enhanced the overall team atmosphere. This is consistent with previous research, which has also revealed that teams with a strong collective work ethic were more successful, more likely to identify group norms, and therefore, significantly more cohesive than their counterparts (Gammage, Caron, & Estabrooks, 2001). Overall, the current coaches felt that although physical ability was the most important foundational variable for cross-country runners, many psychological characteristics were also beneficial to athlete and team development.

Results of the current study also highlighted leadership as an important athlete characteristic. Specifically, coaches discussed the characteristics and roles of athlete leaders in the context of building cohesion. The majority of coaches spoke about the importance of experience and seniority in the identification of their formal athlete leaders. Even though the athletes elected their formal leaders, coaches preferred that they chose senior members due to their maturity, ability to motivate others, and understanding of the

team's atmosphere. Previous research has also found that coaches believed athletes with more experience and higher seniority made more effective leaders (i.e., Loughead, Hardy, & Eys, 2006; Yukelson, Weinberg, Richardson, & Jackson, 1983). Specifically, Loughead and colleagues suggested that more experienced athletes were more mature and more capable of carrying out the various duties assigned to formal leaders, such as motivation and promoting social unity. However, mature or experienced athletes were not necessarily correlated with age. From a university coach's perspective, cross-country running teams are generally composed of both undergraduate and graduate students, thus providing a wide range of running experience and age. Therefore, it is possible for younger runners (e.g., fourth year undergraduate students) to have higher seniority and experience than older runners (e.g., first year graduate students). As a result, the coaches revealed that when ascribing formal leaders, experience and seniority were more important characteristics than chronological age.

The importance of seniority and experience in leaders stemmed from the high expectations placed on athlete leaders by their coaches. For instance, the coaches revealed that athlete leaders have both expressive and instrumental duties. According to Rees (1983), expressive leaders focus more on strengthening team harmony by organizing social outings and events (i.e., social leaders). Rees described instrumental leaders as those who influenced task-oriented issues such as strategic planning and team goals (i.e., task leaders). Previous findings revealed that athletes perceiving balanced leadership across instrumental and expressive functions were more satisfied with the degree of cohesion within the team (Eys et al., 2007). Hardy, Eys, and Caron (2005) suggested that balanced leadership prevented an inordinate amount of focus on either task

or social aspects. For instance, athletes may perceive decreased satisfaction if social priorities dominated the group's attention and task-related group goals were achieved. However, coaches in the current study discussed athlete leadership from a social perspective in slightly greater detail by highlighting several of their social roles and responsibilities. For instance, athlete leaders were responsible for providing social support, integrating new athletes to the team, organizing social events, and resolving intrateam conflict. Coaches revealed that formal leaders were ideal for developing and fostering the social atmosphere due to their social status and ability to show care and concern for others. Similarly, previous findings have suggested that athlete leaders were better equipped to develop and maintain the social atmosphere, as opposed to coaches (e.g., Carron, Hausenblas, & Eys, 2005; Loughead & Hardy, 2005; Loughead et al., 2006). Specifically, Loughead and Hardy stated that coaches often delegated social roles to athlete leaders because they were more socially integrated within the team and better able to reach all team members. Similarly, the coaches felt that a major role of athlete leaders was to create social stability while coaches focused more on training and instruction.

Finally, in addition to social responsibilities, coaches also discussed task behaviours for athlete leaders, such as assisting in season planning and creating training and competition strategies planning. For instance, coaches revealed that athlete leaders should be able to lead practice and provide technical feedback to their teammates. Coaches suggested that these task behaviours were important in cross-country running because coaches were occasionally absent for a portion of the athletes' training. For instance, cross-country running teams often train in wooded trails or in locations where

the coach was unable to follow. Therefore, the coaches revealed that they often relied on their leaders to take charge, keep pace, and in some cases, provide feedback. Several researchers have noted that most coaches view the presence of athlete leaders as a critical component to effective team functioning by influencing team variables such as structure, motivation, and cohesion (i.e., Glenn & Horn, 1993; Todd & Kent, 2004, Loughead et al., 2006). Specifically, Loughead and colleagues noted that athlete leaders who were involved in task related functions, such as providing reinforcement and clarifying responsibilities for teammates were more likely to create a positive team atmosphere. Several coaches also noted that a good leader must relay task-related matters from the team to the coach, and vice versa. For instance, coaches expected their leaders to feel comfortable providing feedback on training and discussing tactical matters as well as specific training regiments. Dupuis, Bloom, and Loughead (2006) also suggested that athlete leaders were expected to have above average communication skills in order to act as a liaison between the coaching staff and the runners. In addition, leaders often provided useful feedback for coaches and athletes on behaviours ranging from tactical to behavioural (Dupuis et al., 2006). Coaches in the current study also mentioned weekly captain meetings where they discussed current team matters. Here, coaches revealed that receiving feedback was useful as it allowed the athletes to provide input. Loughead and Hardy suggested that athletes often responded more positively if they perceived coaches to use a democratic approach to training. Therefore, coaches may encourage athlete leaders to bridge the gap between athletes and coaches in order to create a more collaborative team atmosphere and subsequently to improve the team environment. Overall, it appears current coaches outlined a number of different characteristics and

responsibilities that were important in the identification of peer leadership. Thus, it is reasonable to conclude that ascribing athlete leadership is significantly more complex than simply being characterized by age or skill, as it is often assumed. Furthermore, it should be noted that the majority of previous literature has primarily investigated athlete leadership of interacting teams. To date, no research has examined the characteristics or roles of athlete leaders from of coacting sports such as cross-country running. Therefore, the current research has provided foundational evidence on the influence of athlete leadership in such teams.

Team Development

A third category emerging from the current study was called *Team Development.* The information in this category pertained to the coaches' beliefs on the importance of cohesion as well as several strategies used in its development. This category contained information pertaining to elements of Côté and colleagues' (1995) Coaching Model (CM) and Carron and colleagues' (1985) conceptual model of cohesion. Furthermore, it extends literature on coaching and cohesion by including coacting sports.

The results of the current analysis found that all participants described the development and maintenance of cohesion as a critical element in the success and satisfaction of their athletes. Coaches revealed that strong cohesion led to cooperation that was reflected in performance on the trails, as well as strong interpersonal relationships off the trails, while poor cohesion had a reported negative impact on these outcomes. These results confirmed what was demonstrated in Carron, Coleman, Wheeler, and Steven's (2002) meta-analysis, that cohesion had a significant influence on group processes. However, coaches in the current study reported that the relationship among

coacting team members was different than those in interacting teams. For instance, coaches revealed that since cross-country running requires less interdependence, cohesion was more directly related to supporting teammates. Conversely, Carron and Chelladurai (1981) suggested that since interacting sports required a significant amount of coordination between members for team success, cohesion was primarily concerned with improving levels of communication and positive interpersonal relationships. Therefore, while both current and interacting coaches agreed to the importance of cohesion, there were differences in their rationales.

Coaches in the current study revealed a number of strategies to build cohesion, acknowledging that it was a season-long process requiring significant planning and organization. According to the CM, *organization* is the process where coaches apply their knowledge structure and coordinate tasks to create an optimal training environment for their athletes (Côté, Salmela, Trudel, et al., 1995). Furthermore, organization has been identified as an essential dimension in high-level coaching and team development and encompassed a wide variety of topics such as pre-season preparations, working with a support staff, and recruiting (Bloom, 2002; Bloom, Stevens, & Wickwire, 2003; Côté & Salmela, 1996; Desjardins, 1996). Many of coaches in the current study began meticulously planning the season long before it began. For instance, a significant part of the organizational process was planning team-building interventions. Research investigating team-building interventions in interacting teams revealed that the majority were aimed at improving task-related functions to facilitate interdependent tasks (e.g., communication, team goal setting, coordination) (Carron, Spink, Prapavessis, 1997; Senécal, Loughead, & Bloom, 2008). Results from the current study revealed that

coaches were more concerned with implementing socially oriented team-building activities (e.g., movie nights, pot luck dinners). It appears that cross-country running coaches were more concerned with developing a positive social atmosphere than task cohesion. Perhaps this is due to the possibility that cross-country runners aren't all striving for a common goal (i.e., some may be striving for individual success). Therefore, coaches may find it difficult to build cohesion based on task objectives and use social factors instead.

Coaches also highlighted recruiting as an extension of their pre-season preparations and as an important first component in the development of cohesion. Specifically, coaches understood the importance of prospective athletes' assimilating to the culture of the team. While coaches revealed that physical ability was the first characteristic they looked for, they also noted there were many other factors that were involved when recruiting the "ideal" runner. For instance, once coaches established that an individual could run, they began looking for other characteristics such as their leadership capabilities, work ethic, and ability to "fit in". Coaches often met with prospective athletes', their families, and former coaches to determine whether or not they possessed the characteristics they were looking for. Coaches often refused talented runners due to their presumed inability to work with other athletes. A number of previous studies investigating recruiting in collegiate sports have suggested that physical ability was held in much higher regard than any other factor (e.g., Langelett, 2003; Smith, 2003). Specifically, Langelett described that many revenue-generating collegiate sports (i.e., football, basketball, ice hockey) looked at physical skill and/or size and barely considered an athlete's ability to work with others. It is possible that due to the physical nature (i.e.,

physical contact) of these sports, physical attributes were emphasized for incoming athletes. On the other hand, research by Yukelson (1997) mirrored the findings of the current study. Specifically, Yukelson suggested that recruiting the right student-athlete was a critical consideration that affected the team-building process, and influenced cohesion. Furthermore, Yukelson found that coaches looked for prospective students who bought into the team philosophy, that is, individuals who would fit in with the group and were willing to honour the traditions of the program. Similarly, coaches in the current study revealed previous recruiting failures that ultimately destroyed the chemistry of the team. Therefore, it appears that the current coaches held prospective athletes' personality characteristics to an equal standard than other characteristics such as physical talent. This could be due to the aforementioned importance of cohesion in cross-country running teams.

For all coaches, developing cohesion was a season-long process. Specifically, coaches revealed that the development of cohesion went beyond designated team-building activities during training camp. All six coaches discussed taking advantage of the training and competitive environments during the season to implement cohesion-building strategies. According to the CM (Côté, Salmela, Trudel, et al., 1995), the training component involved applying one's knowledge towards helping athletes acquire and perform skills during practice. Results of the study demonstrated that current coaches meticulously structured practices to enhance cohesion as well as promote physical fitness and tactical strategy. These findings complement those of Bloom and colleagues (2003) who revealed that coaches carefully planned a number of different team-building activities throughout the season and incorporated them into their training regiments. As

an example, present coaches felt it was important to begin (e.g., warm-up) and end (e.g., strides) every practice as a team, rather than individually. Coaches also noted that in cross-country running, it was difficult for the best and worst runner to interact during practices. Therefore, considerable efforts were made to ensure that all members interacted with one another as often as possible. Coaches ensured that all instruction, feedback, and administrative matters were presented to all members of the team rather than individual athletes, to allow athletes to get as much "together-time" as possible. While the primary purpose of these activities may not have been to enhance cohesion, coaches acknowledged that improved cohesion was certainly an outcome of such a training process. Findings by Yukelson (1997) further supported the importance of incorporating team-building activities into the training programs of collegiate athletes. Overall, it appears that coaches took advantage of designated training sessions to strengthen athlete's social relationships and further develop cohesion. Coaches believed that a more positive social environment led to a more supportive and more enjoyable competitive atmosphere.

Carron and colleagues' conceptual model of cohesion (1985) portrays cohesion as a multidimensional construct that includes both group (Group Integration) and individual aspects (Individual Attraction to the Group). These two aspects each divide into task and social cohesion. Task cohesion refers to the orientation toward achieving a group objective, whereas social cohesion refers to the orientation toward developing and maintaining social relationships (Carron et al., 1985). Overall, when asked to describe cohesion, coaches in the current study emphasized the development and maintenance of social cohesion to a greater extent than task cohesion. That is not to say that coaches

discredited the importance of task cohesion, in fact five of the six coaches demonstrated its importance by setting short and long-term goals. Specifically, team goals were said to develop cohesion by providing a sense of commonality and a sense of purpose within the team. Similarly, Yukelson (1997) described goal setting as an ideal cohesion-building activity because members were held accountable for his/her own actions and accepted responsibility for their contributions to group outcomes. However, in the case of collegiate cross-country running, only the top five performers on each team contribute to the team score. In other words, on any given competition, over half of its members do not contribute directly to the total team result. Therefore, due to the nature of the sport, task objectives may not provide the team with a sense of commonality and purpose, particularly for those who do not contribute. In these instances, coaches revealed that they attempted to find other ways to include bottom runners as contributors to the group goals. For example, bottom runners were assigned various roles during competition (e.g., pace setter, spotter, motivator) that helped top runners achieve the best possible result, even if it meant sacrificing their own performance. Coaches admitted that it was difficult to keep everyone motivated with group goals, therefore, it was important for all runners to accept their various roles within the team. Overall, while coaches appeared to hold social cohesion in higher regard, they recognized task cohesion as an important component of the global development of cohesion.

The importance of social cohesion rested in its ability to create a positive social atmosphere for athletes to train and compete. According to a series of studies by Carron and colleagues (e.g., Carron et al., 1985; Carron, Bray, & Eys, 2002; Carron et al., 2002), it was determined that social cohesion was a slightly stronger predictor of team success

than task cohesion. Coaches in the current study revealed that positive social relationships were especially crucial in cross-country running because it was a mentally demanding sport that involved significant pain. Therefore, athletes who received social support from their teammates were much more likely to achieve their full potential whereas athletes without a proper group support would not. Finally, while the development and maintenance of social cohesion was commonly discussed as a beneficial aspect of the overall group process, it played a particularly important role in overcoming intrateam competition. Given the nature of the sport, it came as no surprise that coaches discussed intrateam competition. Previous research has established that intrateam competition could be detrimental to the team's success and overall functioning if not monitored properly (Sambolec, Kerr, & Messé, 2007). Coaches in the current study also revealed that teammates who were constantly put in head to head competition with one another would eventually become burnt out or harmful to the team's social atmosphere. However, coaches noted that teammates with close personal relationships (i.e., high social cohesion) were better able to overcome the negative aspects of intrateam competition. Specifically, in these cases, intrateam competition could exist in a friendly, non-harmful manner. Sambolec and colleagues further stated that friendly competition (i.e., competition amongst highly cohesive teammates) could inevitably provide a motivational force resulting in better individual performance. Therefore, due to the fact that intrateam competition is inevitable in cross-country running, coaches in the current study made particular efforts to build social cohesion in order to create strong social bonds and subsequently prevent rivalries. Overall, it appears that coaches identified task and social cohesion as powerful tools for success in cross-country running.

CHAPTER 6

Summary of the Study

Coacting sports account for nearly 40% of all sports in Canadian Interuniversity Sport (CIS) and approximately 50% of the athletes and coaches (www.university sport.ca). Despite the increasing popularity of university coacting sports such as track and field, swimming, and golf across North America, research has remained limited on aspects involved in coacting sports, including coaching and cohesion. For interacting sports, it has generally been accepted that cohesion and performance are positively related, where higher cohesion leads to more successful outcomes (Carron, Coleman, Wheeler, & Stevens, 2002). Furthermore, Bloom, Stevens, and Wickwire (2003) found that interacting sport coaches relied heavily on cohesion building strategies throughout the season to increase team cohesion and subsequently enhance individual and team performance. However, the relationship between cohesion and performance could not be generalized across all sports due to several differences in team composition and athlete characteristics (Carron et al., 2002). More specifically, no study has examined elite coaches perception of cohesion in collegiate coacting sports. Therefore, the purpose of this study was to explore the experiences of elite cross-country running coaches as it related to cohesion.

Participants in this study were six CIS cross-country running head coaches. Participants were chosen from across Québec, Ontario, and the Maritime provinces, representing three of the four major CIS regional associations. All six participants coached both male and female runners and were identified by a panel of experts on University cross-country running as experts in their field. Participants were invited to

participate in the study based on four criteria. First, they were the head coach of a CIS cross-country running team. Second, they had a minimum of 10 years head coaching experience at the collegiate level or higher in cross-country running. Third, they completed at least a level 3 in the old National Coaching Certification Program (NCCP) and/or a competition stream certification (high performance) from the new NCCP. And finally, they reached a CIS annual championship at least once in the last five years of coaching. Once these criteria were established, coaches were contacted by email and informed of the nature of the study. They were invited to participate in a face-to-face individual interview at a mutually convenient location across the provinces of Québec, Ontario, and Nova Scotia for a period varying from one to three hours.

A case study design was used to explore the experience of coaches when managing coacting athletes. Semi-structured, open-ended interviews were conducted following an interview guide and three higher-order categories emerged from the analysis of the data. These categories were named *coach personality and experiences, athlete personality and characteristics, and team development. Coach personality and experiences* pertained to the journey of knowledge acquisition of coaches, from their earliest sport participation to their current coaching position. This included ways in which knowledge was acquired and the influence of other individuals on their career progression. *Athlete personality and characteristics* discussed the coaches' perceptions of specific characteristics of their athletes. For instance, this category described the athletes' personal attributes ranging from aspects of their personality to specific psychological characteristics, including leadership skills. More importantly, this category described the impact these characteristics had on the development of cohesion within a university

cross-country running team. Finally, *team development* included the participants' beliefs on the importance of cohesion in cross-country running. This category described the coaches' perceptions of cohesion as well as several different strategies to develop and maintain it.

Despite the idiosyncratic nature of each coach's development, many common themes emerged from the data. Most notably, similarities were found in the perception of cohesion in their sport. All coaches agreed that cohesion was an essential component to ensure success in cross-country running. Furthermore, similarities were found in the different ways cohesion was developed and maintained throughout the season. For instance, coaches employed cohesion-building interventions before the season during training camp and during practices throughout the season. Coaches also agreed that the psychological makeup of their athletes was important to the overall success and atmosphere of the team. For instance, coaches actively recruited individuals with personalities that fit with the team's philosophy. Moreover, they sought individuals who were described as being "team players" with characteristics such as leadership, selflessness, and strong work ethic. These characteristics were revealed to be an important component in building a positive team atmosphere and influencing the development of cohesion. Finally, coaches revealed that the development of social cohesion was considerably more important that task cohesion. This is conceivably due to the unique dynamic of the sport where task objectives may not provide the team with a sense of commonality.

Conclusions

Within the confines and limitations of the current study, the following conclusions appear warranted:

- All coaches began participating in a variety of sports during their childhood, but only began running competitively as adolescents.
- All six coaches suggested that valuable knowledge was acquired from their previous coaching experiences. They felt these experiences shaped their philosophies and tactical knowledge.
- All coaches agreed that the process of learning to coach was ongoing and did not end once they had reached the University level.
- Participants utilized both formal and informal learning opportunities to facilitate their development as coaches.
- Only two of the coaches praised the effectiveness of formal coaching education in their personal growth and development.
- Several characteristics were shared between the coaches and contributed to their success, including effective communication skills, flexibility, and being respectful.
- Coaches also shared similar thoughts pertaining to their relationship with their athletes. Specifically, they believed it was important to properly balance being a coach and a friend.
- All coaches agreed that physical and psychological characteristics were important for cross-country runners.

- Despite the obvious importance of physical ability, coaches agreed that psychological characteristics such as mental toughness, work ethic, determination, and leadership were equally as important.
- Athlete leaders were commonly identified as senior members of the team and not necessarily the oldest members.
- Athlete leaders were described as an essential component to the development of cohesion. Specifically, they were primarily responsible for creating a positive social atmosphere, such as ensuring that all new athletes became assimilated to the team, and the organization of social events.
- Athlete leaders were also responsible for task behaviours such as providing feedback to coaches regarding administrative decisions.
- All coaches described the development and maintenance of cohesion in cross-country running as a critical element to cooperation, success, and satisfaction among athletes.
- Coaches emphasized the development of social cohesion to a greater extent than task cohesion due to the fact that task objectives in coacting sports may not provide a source of commonality and purpose between members.
- Social relationships were especially crucial in cross-country running due to the heavy mental and physical demands of the sport. Coaches noted that positive social relationships helped with perseverance through such obstacles.
- Coaches revealed several cohesion-building strategies that took place throughout the year, beginning at training camp.

- Coaches organized cohesion-building activities throughout the season, most commonly during training (group runs) and social events (pot luck dinners).
- Coaches often met with prospective athletes, their parents, and former coaches to ensure they were a proper fit for the team before they were selected.
- Coaches revealed that athletes with close interpersonal relationships were better able to overcome negative intrateam competition.
- Intrateam competition is unavoidable in cross-country running, therefore, coaches believed that high levels of cohesion are an effective way to prevent harmful rivalries between teammates.

Practical Implications

The current study can expand the body of literature on coaching science by including the often understudied sample of coacting sport coaches. As mentioned previously, little to no empirical research has examined the development and experiences of coaches of coacting sports. The current study has begun the process of addressing this overlooked realm of coaching and can be used to provide a more complete outline of the experiences of expert coaches. More specifically, the study offers some insight to aspiring cross-country running coaches on how to acquire the appropriate coaching knowledge. Although this was not a purpose of the study, participants expressed an early interest in various sports followed by participation in competitive running in adolescence. Coaches revealed that competitive running experiences, particularly at the university level, enhanced their overall understanding of the sport and the various struggles of collegiate athletes. Thus, aspiring cross-country running coaches should be encourage to gain as much in-sport experience as possible in order to build their knowledge base.

Furthermore, this study provided important insight to the experiences of collegiate level coaches, particularly with respect to coaching student-athletes. Specifically, future coaches can use the results of the current study to increase their awareness of coaching at the university level. Student-athletes are a very unique population given their various academic, athletic, and social responsibilities. The current results may illustrate effective coaching strategies in dealing with these demands while maintaining positive coach-athlete relationships. In addition, this study could provide information on coaching practices that could assist with the curriculum development of the NCCP for cross-country running, as well as various other coacting sports. In particular, the results of this study highlight the importance in developing a positive team environment and positive social relationships among athletes. The development of team cohesion has been identified as a valued component to coaching interacting sports (Carron et al., 2002). The current study encourages further investigation of this line of research in a variety of other sports contexts.

The current findings may also have practical implications in organizational behaviour. As previous research has suggested, intrateam competition has often been promoted as a motivational tool in the business world to enhance individual productivity and status. However, current findings have suggested that controlled, friendly competition can be used to achieve success among members with high social cohesion. In other words, highly cohesive members may still yield positive performances, without harming relationships or create rivalries between co-workers. While business and sport contexts are slightly different, some of the current findings may be transferable, at least for exploratory purposes.

Finally, the current study provides a greater understanding of the dynamics of cross-country running. The majority of previous studies have assumed that coacting sports such as cross-country running were considered *individual* sports where little intrateam cooperation was required. However, the results of the current research clearly provides a contrasting view, that cross-country running is in fact a team sport that requires positive relationships among members for optimal success. Coaches should also be aware of the importance of recruiting. Moreover, cross-country running is available to age groups ranging from elementary school to master athletes. Therefore, the current findings could provide coaches of all levels a practical base for developing successful team programs.

Limitations

Although the study enhanced the understanding of the experiences of elite cross-country running coaches pertaining to cohesion, some limitations need to be addressed. First, the interviews focused solely on the coaches' perceptions. By adding the perceptions of the athletes, a more complete understanding of the influence of cohesion on the sport would emerge. Second, results might only be specific to male coaches. It has previously been suggested that gender differences exist regarding several coaching behaviours (Fasting, 2000; Millard, 1996). It may be interesting for future research to compare the current results with a sample of female coaches from the collegiate cross-country running community. While there are only a handful of female cross-country running head coaches in the CIS, this distinction merits attention. Third, the results may only apply to elite cross-country running coaches in Canada. It would be advantageous to investigate other coaches in the sport at different stages of development to explore the

influence and application of cohesion at these levels. Fourth, sample of coaches only included Canadian-born coaches in the Canadian collegiate system. It would be interesting to investigate the differences between Canadian and international coaches' perceptions. For instance, would the heightened intensity, budget, and popularity of collegiate sports in the United States influence the behaviours of their cross-country coaches? Lastly, the current findings may only be generalizable to coaching student-athletes. These results may not be applicable for coaches who coach non-student athletes with similar levels of physical ability. Student-athletes have a limited period of eligibility to run collegiately. This may influence a variety of decisions made by the coach pertaining to cohesion or other issues.

Recommendations for Future Research

This was an exploratory study into the dynamics of coacting sport teams and the objective was to address the gap in the literature concerning the experiences of coacting sport coaches as it related to cohesion. As such, future research could take a number of directions to further the advancement of research in coaching, cohesion, and coacting sports. For instance, it may be interesting to further explore the various coacting coaching populations other than cross-country running such as swimming, diving, gymnastics, or tennis. It would be advantageous to conduct coaching research in additional coacting sport populations in order to draw comparisons with the current sample. Whereas cross-country running requires all runners to run against one another in a head-to-head manner, gymnasts are required to perform individual routines while still yielding a team score.

While the current study focused on elite coaches, future studies could investigate all levels of cross-country running coaches. In Canada alone, cross-country running is

available for children as young as 8 years old and remains competitive for master athletes. It is therefore possible that coaches adjust their philosophies and behaviours in accordance with the age of their athletes. Additionally, future research could investigate athletes' perceptions of cohesion in coacting sports. As mentioned, this study investigated the perceptions coaches on cohesion in their sport, however, it failed to address the athletes' perceptions of cohesion in their sport.

Finally, some evidence has suggested that coaches approach cohesion differently for male athletes compared to female athletes (e.g., Amorose & Horn, 2000; Beam, Serwatka, & Wilson, 2004; Gardner, Shields, Bredemeier, & Bostrom, 1996). Collegiate coacting teams are unique because they typically have one coach for both males and females. Therefore, while the results from the current study are compelling, it may be interesting to investigate further to determine whether elite coaches use different cohesion-building strategies or have different perceptions, depending on gender. While the results of the current study provided information regarding the experiences of elite cross-country running coaches related to cohesion, questions still remain unanswered in this area. Despite this, these results are a first step in furthering the research on coaching, cohesion, and coacting sports.

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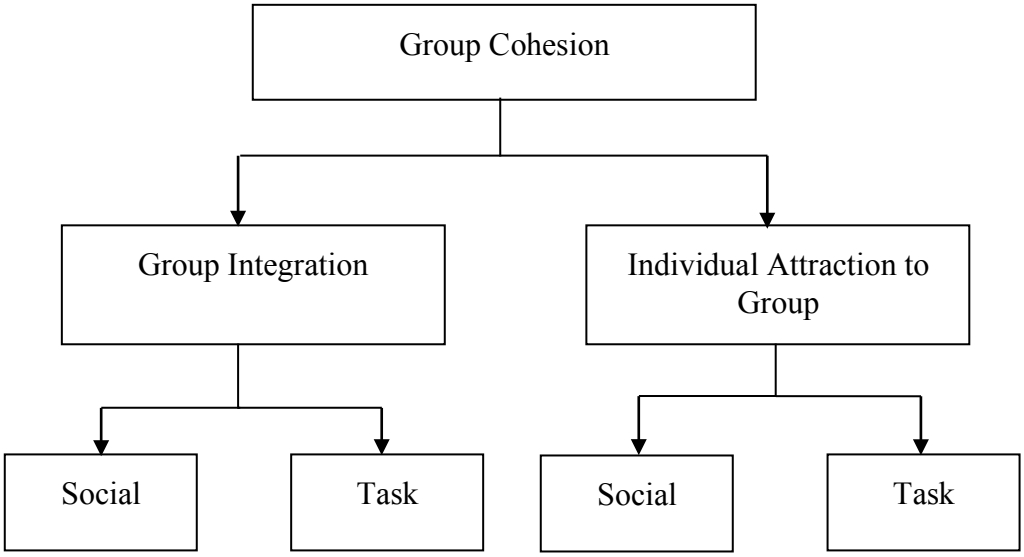
Appendix A

A Conceptual Model of Group Cohesion

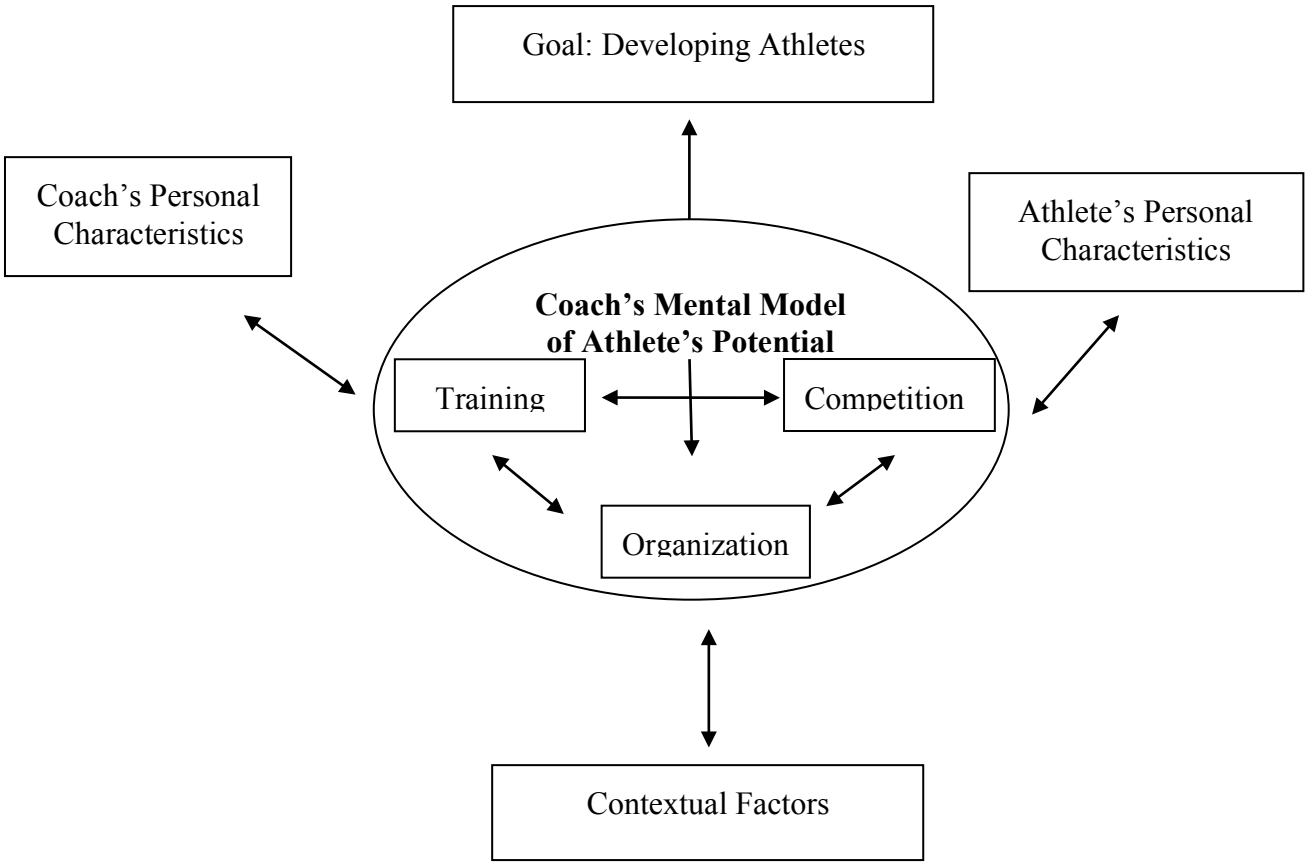


Adapted from:

Carron, A. V., Widmeyer, W. N., & Brawley, L. R. (1985). The development of an instrument to assess cohesion in sport teams: The Group Environment Questionnaire. *Journal of Sport Psychology, 7,* 244-266.

Appendix B

The Coaching Model (CM)



Adapted from:

Côté, J., Salmela, J. H., Trudel, P., Baria, A., & Russell, S. J. (1995). The coaching model: A grounded assessment of expert gymnastic coaches' knowledge. *Journal of Sport & Exercise Psychology, 17,* 1-17.

Appendix C

INFORMED CONSENT FORM

McGill University requires that participants be informed of the details of any research study in which they participate. However, this does not imply that the participant is put at risk through their participation; the intention is simply to ensure the respect and confidentiality of individuals concerned. This study is in partial fulfillment of the requirements for the degree of Master of Arts for Marc Cormier, a graduate student in sport psychology, in the Department of Kinesiology and Physical Education at McGill University.

The purpose of this investigation is to identify the experiences of university cross-country coaches as it pertains to cohesion. In particular, this study will attempt to examine various strategies and behaviours of cross-country coaches. If you participate in this study you will be requested, without payment, to partake in a 90 minute interview which will be audio taped. If more information is necessary, then a follow-up telephone conversation may occur. Once the interview is complete, you will obtain a typed transcript, which may be edited at your discretion. Prior to publishing, you will also receive copies of the results and the conclusion of the study. The information you provide here will **remain confidential.** All data will be securely stored in a password protected computer, and will be destroyed 2 years after the study ends. The information disclosed during the interview will remain confidential and will be used for publication purposes in scholarly journals or for presentations at conferences. The researchers will not disclose names or identity of the participants at any time.

Your participation in this study is voluntary and not mandatory. You are free to refuse to answer any question or withdraw from participation at any time, for any reason, without penalty or prejudice.

I (please print your name), , have read the above statements and have had the directions verbally explained to me. I freely consent and voluntarily agree to participate in this research project based on the terms outlined in this consent form. I recognize that I may refuse to continue participation at any time, without penalty, and that all the information gathered will remain confidential.

Signature Date

Please feel free to contact us at any time:

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Appendix D

Demographic Questionnaire

1. Name: _____

2. Age: _____

3. E-mail: _____

4. Address _____

_____

_____

5. Phone Number (home, work, and cell).

_____

_____

_____

_____

6a. Please list the highest level of education that you have completed.

_____

_____

_____

_____

_____

_____

_____

_____

6b. Please list the highest level of coaching certification you have completed (old and new streams).

7a. What is your current coaching position?

7b. How long have you held this position?

7c. Have you coached any other cross-country team at any other level?

7d. Have you coached any other sport at the elite level other than cross-country?

7e. If applicable, how many years have you served as an assistant coach for this sport? (Please list dates and locations)

8. Please list any team success as head coach (conference, divisional, provincial, or national levels)

9. Please list any personal coaching awards, recognition, etc.

10. Please list individual awards/accomplishments that athletes you have coached have received (i.e., all Canadian, academic all Canadian, conference all star honours, leadership awards etc).

Appendix E

Interview Guide

Opening Statement: In the sport of cross-country running, athletes not only compete against other schools, but also against members of their own team. It is because of this dynamic that I am particularly interested in how cross-country running coaches manage their team and develop cohesion (or "togetherness") within their team.

Introductory Questions

1. Briefly discuss your athletic career, including participation in sports where athletes compete against teammates (i.e., cross-country running, track and field, swimming)

2. Can you describe your career as a coach from the beginning until now?
   Probe: Initiation into coaching
   Probe: Did you coach other sports before coaching cross-country?

Key Questions

Interviewer: For the following questions, I would like you to answer all of the coach-related questions with respect to your experience as a CIS cross-country coach.

3. How do athletes' individual ability affect the team's atmosphere?

4. When choosing a runner for your team, what are the main qualities you look for?
   Probe: Physical qualities?
   Probe: Academic qualities
   Probe: Personal qualities

5. How does your vision of the team's potential influence your coaching behaviours?

6. How do you prepare for an upcoming cross-country season?

7. Why is cohesion important for a cross-country team?
   Probe: How/why? In what ways?

8. How much time do you recommend teammates spend with one another outside of training or competition?
   Probe: Why?

9. How does the relationship between teammates affect the training environment?
   Probe: Motivating? Competitive?

10. How does the relationship between teammates affect the competitive environment?
    Probe: Motivating? Competitive?

11. What traits or characteristics do you feel are important for coaching cross-country runners?

12. What are the challenges specific to coaching cross-country?

Concluding Question

13. Is there anything else you would like to add?

Appendix F

Alphabetical Listing of the Frequency of Topics Discussed by Each Participant

Tags (Level 1)	**n**	**C1**	**C2**	**C3**	**C4**	**C5**	**C6**
Altruism	2	0	0	0	2	0	0
Athlete leadership - characteristics	21	1	3	0	5	6	6
Athlete leadership - cohesion	5	0	2	0	1	1	1
Athlete leadership - importance	12	1	4	0	4	3	0
Athlete leadership - physical ability	8	1	0	0	4	1	2
Athlete discipline	6	2	2	1	1	0	0
Athlete mental toughness	11	3	0	1	4	2	1
Athlete personal growth and development	5	0	1	0	0	3	1
Athlete physical ability	9	2	1	1	3	2	0
Athlete social skills	3	0	0	0	2	1	0
Athlete value systems	2	0	0	1	1	0	0
Athlete work ethic	8	1	3	4	0	0	0
Athletic experiences	7	1	1	1	2	1	1
Being a team player	5	1	0	0	3	1	0
Caring for teammates	4	0	0	1	2	1	0
Cross-country running	19	0	3	5	4	7	0
Club team coaching	3	0	1	0	2	0	0
Coach leadership	14	0	3	1	6	1	3
Coach thoughts and beliefs	12	2	3	2	3	2	0
Coaching ability	5	0	0	0	2	3	0
Coaching other sports	4	0	1	0	2	1	0
Coaching tactics	11	1	1	3	5	1	0
Cohesion - importance	22	2	4	1	5	5	5
Cohesion - thoughts and beliefs	11	2	1	1	0	6	1
Community involvement	7	0	0	1	6	0	0
Competitive running experiences	14	1	1	3	3	2	4
Developing friendships	3	0	0	2	0	1	0
Evolution into coaching	25	1	3	4	12	2	3
Formal coaching education	8	1	2	0	1	1	3
Goal setting - individual	14	1	2	2	6	1	2
Goal setting - team	9	0	2	0	4	3	0
Goals - monitoring	9	1	2	0	3	1	2
Goals - teammates	4	0	0	1	2	1	0
Having fun	8	0	0	3	0	2	3
Importance of winning	8	1	0	1	3	2	1
Intrateam competition	19	3	4	3	2	4	3

Learning from other coaches	6	0	0	0	3	0	3
Love of coaching	7	0	1	3	1	2	0
Motivation	8	0	1	1	2	3	1
Post graduate education	1	0	0	0	1	0	0
Pre-season preparations	17	3	1	3	5	3	2
Reasons for coaching	6	0	0	0	4	2	0
Recruiting	16	2	2	3	3	2	4
Relationship between teammates	16	2	3	3	2	2	4
Relationship with athletes	13	2	1	2	7	1	0
Scholarships	2	2	0	0	0	0	0
Social gatherings	9	2	0	3	1	1	2
Talent of athletes	6	0	1	1	1	3	0
Team atmosphere	21	4	3	4	3	6	1
Team conflict	6	1	1	3	1	0	0
Team strategies during competition	12	0	3	1	5	1	2
Team strategies during practice	4	1	0	2	0	1	0
Teammates supporting each other	10	1	2	1	3	3	0
Training camp	22	3	2	4	5	2	6
University athletes	11	2	0	3	2	4	0
Total	537	55	73	83	154	104	68