Exploring the Relationship between Coaches' Leadership Behaviours and Athletes' Positive Developmental Outcomes and Negative Experiences in Canadian University Sport

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Abstract

The purpose of this dissertation was to a) examine the correlational relationships between Canadian university athletes' perceptions of coach leadership behaviours and their perceptions of positive developmental outcomes (e.g., life skills) and negative experiences related to university sport, and b) explore how coach leadership behaviours and the associated developmental outcomes and negative experiences were described by both coaches and athletes. Data for this dissertation were collected over four stages. In Stage One, an online survey was used to collect data from a pan-Canadian sample (n = 605) of university athletes. In Stage Two, semi-structured open-ended interviews were conducted with fifteen university athletes. In Stage Three, semi-structured open-ended interviews were conducted with fourteen university coaches. In Stage Four, an online survey was used to collect data from a second pan-Canadian sample of university athletes (n = 498). Five articles were written to address the purpose of this dissertation.

In Article One, data from two pan-Canadian samples of athletes were used to modify and confirm a new measurement tool known as the University Sport Experience Survey (USES). The USES provides a reliable and factorially-valid instrument for measuring development in university sport. In addition, Article One provided the first operational definitions of the positive developmental outcomes and negative experiences that could be reliably and validly assessed in a university sport context.

Article Two qualitatively explored athletes' perceptions of the developmental outcomes associated with their participation in university sport, as well as their perceptions of transfer. Results provided additional support for certain USES categories to be used for understanding positive development within the context of Canadian university sport programs. Further, results

suggested university sport programs offer rich opportunities for developing skills, qualities, experiences, and relationships needed to become functioning members in our society.

In Article Three, quantitative survey data were used to assess the cross-sectional relationships between athletes' perceptions of their coaches' leadership behaviours and outcomes from the USES. Coach leadership behaviours were conceptualized within the Full Range Leadership Model and assessed using the Multifactor Leadership Questionnaire. Findings showed that transformational coaching was generally related to positive developmental outcomes and inversely related to athletes' negative experiences in sport. Moreover, coaches' passive/avoidant behaviors were commonly related to athletes' negative experiences in university sport. Contrary to expectations, passive/avoidant coaching behaviors were also positively related with a number of positive developmental outcomes.

Article Four qualitatively assessed athletes' perceptions of who they believed was responsible for their positive development within the university sport context. Athletes specified other athletes, the head coach, the coaching staff, and their parents as the people who influenced their positive development within the context of university sport. Notably, athletes felt they themselves were the ones who contributed the most to their own development.

Article Five qualitatively explored coaches' perceptions of and strategies for fostering their athletes' positive development through university sport. The coaches believed there were inherent conditions surrounding university sport that facilitated positive development. However, the coaches maximized their athletes' development by establishing a support network, building team culture, and empowering their student-athletes by teaching them fundamental skills related to self and social regulation.

Together, the five articles make novel theoretical and practical knowledge contributions to the field of positive development through sport, and set a precedence for positive development research in university sport, as well as other emerging adult sport contexts.

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Statement of Contribution

I, Scott Rathwell, was responsible for gathering and analyzing data in the four phases of data collection. I was entirely responsible for writing the five articles that made up this doctoral dissertation. Dr. Bradley Young reviewed all five articles and provided invaluable feedback and editing at a conceptual and organizational level. Moreover, Dr. Young was instrumental in establishing the trustworthiness of the qualitative data in Article Two, Article Four, and Article Five. Specifically, in Article Two, Dr. Young acted as an independent coder and assessed 23% of the data. Dr. Young's coding was used to establish interrater reliability through Kappa analyses. In Article Four, Dr. Young served as a critical friend and challenged my coding and interpretations. In Article Five, Dr. Young helped establish investigator triangulation by checking whether the data were accurately reflected by the themes, sub-themes, and codes that I identified. Dr. Camiré and Dr. Gravelle provided conceptual feedback during the thesis proposal, as well as during our annual meetings where I updated them on the progress of my dissertation. Ethical approval was obtained from the office of research ethics and integrity researcher at the University of Ottawa prior to data collection for each of the five studies found within the current dissertation.

Chapter One

Introduction

Youth sport programs have been identified as positive socializing agents where agents can teach important life skills to athletes (Gould & Carson, 2008; Holt, Tink, Mandigo, & Fox, 2008). Life skills are defined as ‘‘skills that enable individuals to succeed in the different environments in which they live, such as school, home and in their neighborhoods. Life skills can be behavioral (communicating effectively with peers and adults) or cognitive (making effective decisions); interpersonal (being assertive) or intrapersonal (setting goals)’’ (Danish, Forneris, Hodge, & Heke, 2004, p. 40). Today, there is a strong interest in developing life skills through sport, which is evidenced by the majority of youth and adolescent sport organizations having life skill development as one of their primary goals (Gould & Carson, 2008).

Although many sport organizations have begun including life skill development experiences in their programs, their decisions have only been partially substantiated by research. On one hand, athletes and coaches have described how sport can provide experiences necessary for developing life skills such as initiative, leadership, communication skills, time-management, responsibility, ability to work with others, goal setting, and accountability (Camiré, Trudel, & Bernard, 2013; Camiré, Trudel, & Forneris, 2009; Voelker, Gould, & Crawford, 2011; Wilkes & Côté, 2010). Further, psychological outcomes such as reduced anxiety and improved self-esteem, self-worth, confidence, feelings of connectedness, identity formation, caring, enjoyment, and emotional regulation are related to sport participation (Falcão, Bloom, & Gilbert, 2012; Ullrich-French & McDonough, 2013). Conversely, sport participation is also linked with adverse experiences with coaches and teammates, feeling pressure from parents, experimenting with alcohol and substance abuse, and negative psychological development (Coatsworth et al., 2005;

Dever et al., 2012; Dworkin & Larson, 2006; Larson, Hansen, & Moneta, 2006). Finally, sport participation can produce both positive and negative outcomes and experiences simultaneously (e.g., Camiré & Trudel, 2013; Larson et al., 2006).

According to the research described above, sport participation alone is not enough to foster life skill development in athletes. Instead, life skill development is dependent on numerous individuals (e.g., coaches, parents, teammates) and the complex interactions they have with athletes (Camiré, Trudel, & Lemyre, 2011; Gould, Collins, Lauer, & Chung, 2007). Among those individuals, sport coaches may be the ones who exert the most influence on athletes' sport experience, especially in youth sport (Camiré et al., 2011; Steelman, 1995). Steelman (1995) noted that coaches' values and philosophies may be especially impactful on athletes' experiences in sport because of the position of authority and influence they hold. Today, successful coaching is defined as the consistent application of "integrated professional, interpersonal, and intrapersonal knowledge to improve athletes' competence, confidence, connection, and character in specific coaching contexts" (Côté & Gilbert, 2009, p. 316). In other words, coaching requires a great deal of knowledge and leadership skills to manage the demands of athletes, and is associated with athletes' achievement of desired sport performance outcomes and outcomes related to life skill development. Therefore, it is not surprising that many coaches see themselves as responsible for creating a positive team environment, developing athletes' sport and life skills, and improving athletes' psychological and social development (Vella, Oades, & Crowe, 2011).

School sport programs may be particularly promising environments where coaches may foster athletes' life skill development. High school sport participation has been associated with favourable academic outcomes such as increased academic aspirations (i.e., wanting to go to college), higher grades, positive attitudes about school, enrollment in higher education (i.e.,

college or university), and school engagement (Eccles & Barber, 1999; Eccles, Barber, Stone, & Hunt, 2003; Fox, Barr, Neumark, & Wall, 2010; Fredricks, 2012). Further, it has been argued that school sport programs focusing on personal and psychosocial development contribute to the educational mission of schools (Danish, Forneris, & Wallace, 2005), with further improvements possible when programs are led by coaches engaged in promoting those benefits. Importantly, Bailey et al. (2009) suggest the benefits of school sport participation are mediated by the creation of appropriate instructional experiences by adult leaders such as coaches.

Research has shown that some high school coaches want to be successful on the field; however, they also prioritize their athletes' academic success and life skill development, and implement strategies to achieve these goals (e.g., Camiré & Trudel, 2010, 2013; Gould et al., 2007). For example, coaches created a mandate for athletes' life skill development within their coaching philosophy, presented their philosophies to their athletes, articulated how they intended to implement their annual coaching plan, had clear and consistent rules, modeled the behaviours and traits they wished to instill, developed close relationships with athletes, customized their athletes' experience, provided leadership opportunities, established a safe but challenging climate, and involved athletes in team decisions. All of these intentional steps pertain to the education of athletes on life skill concepts, as well as the application and transferability of life skills (e.g., Camiré & Trudel, 2010, 2013; Gould et al., 2007).

Similar to high school coaches in Canada, university coaches face the challenge of developing competitive athletes while simultaneously promoting life skill development (Flett, Gould, Paule, & Schneider, 2010; Rathwell, Bloom, & Loughead, 2014; Vallée & Bloom, 2005). However, university coaches operate within a more competitive environment whereby their employment status is traditionally more dependent on their win/loss record than for high school

coaches. Further, the talent level of athletes is higher in university sport than in high school sport. In some sports, Canada's Olympic team is composed of many top ranked Canadian Interuniversity Sport (CIS) athletes (e.g., women's hockey); while athletes from other CIS sports (e.g., football) may be drafted to professional leagues (e.g., National Football league, Canadian football league).

Despite the competitive nature of Canadian university sport, there remains a strong emphasis on life skill development when compared to countries such as the United States, where sport performance receives more precedence. For instance, Canadian universities retain high academic entrance standards for athletes, and coaches emphasize athletes' personal and psychosocial development (Flett et al., 2010; Rathwell et al., 2014). Moreover, Flett et al. (2010) noted that coaches recruited athletes based in part on their life skills and felt that it was their responsibility to provide the necessary structure and support to foster their players' life skill development. Finally, coaches believed athletes' life skill development was inseparable from academic achievement (Flett et al., 2010). Although some university coaches have cited the importance of developing their athletes' life skills, a dearth of knowledge exists on a) what experiences and outcomes constitute life skill development with the context of university sport, b) what life skill development experiences and outcomes can be validly and reliably measured in context of university sport c) whether university sport programs afford athletes with the necessary experiences to foster their life skill development, and d) what coaching behaviours promote athletes' life skill development experiences and outcomes in university sport. The articles in this dissertation will collectively address the aforementioned gaps in the literature.

Conceptual Frameworks

To our knowledge, no conceptual framework exists for understanding life skill development in the context of university sport. Therefore, we elected to frame our study using

notions borrowed from an established framework found within the youth sport literature (Petitpas, Cornelius, Van Raalte, & Jones, 2005). Petitpas et al. (2005) affirmed that four components must be addressed in order for youth sport programs to have a greater likelihood of successfully developing life skills: (a) context, (b) external assets, (c) internal assets and (d) research and evaluation. Specifically, successful sport programs must: (a) engage athletes in structured and goal-focused activities that are intrinsically motivating and believed to be important enough to warrant the investment of considerable time and effort (context); (b) have caring and supportive adults and older peers that challenge athletes to improve themselves (external assets); (c) provide opportunities for athletes to learn, acquire, or improve their life skills (internal assets); and (d) devote efforts towards evaluating the process and effectiveness of life skill development strategies (research and evaluation). Canadian university sport programs are socially desirable, goal oriented, and require significant time and effort from athletes (context). Furthermore, they involve teams of trained adults (i.e., coaches) who challenge athletes to improve themselves (Rathwell et al., 2014). Therefore, university sport programs appear to possess many of the components that Petitpas et al. (2005) describe as necessary for fostering life skill development experiences and outcomes. However, despite having the necessary environment (context) and adult support (external assets), there remains a dearth of knowledge on what life skill development experiences and outcomes (i.e., internal assets) are relevant within the context of university sport, and whether coaches provide athletes with the experiences necessary for them to develop them. This dissertation will provide a first examination of the utility of Petitpas et al.'s (2005) framework for understanding life skill development within the context of university sport.

One notable limitation to Petipas et al.'s (2005) framework is that they do not identify what internal assets or life skills need to be developed for positive youth development to be inferred. Based on Gould and Carson's (2008) synthesis of life skill development through sport literature, they advocated for the use of the Youth Experience Scale (YES; Hansen & Larson, 2005) as a starting point for determining the pertinent life skill development outcomes and experiences to study within the sport domain. They claimed that the YES provided an excellent example of the types of developmental measures needed. For instance, the YES includes 11 measures to assess sport participants' perceptions of identity experiences (exploration and reflection about oneself), initiative experiences (goal setting, effort, problem solving, and time management), basic skills (emotional regulation, cognitive skills and physical skills), interpersonal relations (peer relationships and prosocial norms), teamwork and social skills (group processes, feedback, leadership and responsibility), adult networks and social capital (integration with family, linkages to community and linkages to work and college), and negative experiences (stress, negative peer influences, social exclusion, negative group dynamics, and inappropriate adult behaviors). Based on Gould and Carson's (2008) recommendation, we used the positive youth developmental outcomes and negative experiences defined within the YES (Hansen & Larson, 2005) as a proxy measure of internal assets and life skill development for this dissertation, and it was assumed that if university athletes were experiencing the pertinent outcomes and experiences defined by Hansen and Larson (2005), they would be meeting the requirements for life skill development to occur. As such, for the remainder of this dissertation, life skill development will be referred to as positive developmental outcomes and negative experiences.

A potentially useful leadership paradigm for investigating the positive youth developmental outcomes and negative experiences in sport is the full range leadership model (FRLM; Avolio, 2011). According to the FRLM, optimal development (i.e., performance and personal development) occurs when leaders frequently use effective behaviours and are highly involved in followers' development (Avolio, 2011). The FRLM differentiates leadership behaviours according to three distinct processes (laissez faire, transactional, and transformational leadership) which differ in degree of involvement and effectiveness. Laissez faire leadership is considered the least involved and least effective form of leadership and is typically characterized by an absence of leadership. Thus, laissez faire behaviours include forfeiting authority and avoiding position taking or decision making.

Transactional leadership is considered a more effective and active process of leadership and is composed of a) contingent reward, b) passive management by exception, and, c) active management by exception (Avolio, 1999, 2011). Contingent reward entails emphasizing desired behaviours and outcomes and providing reinforcement when followers achieve them. Passive management by exception involves waiting for errors to arise and taking corrective action once they have occurred. Active management by exception also involves taking corrective action; however, rather than passively waiting, leaders prevent errors from occurring by actively monitoring for deviances. In sum, transactional leadership involves establishing an exchange relationship (contingent reward) with followers and ensuring the exchange operates efficiently (active and passive management by exception).

Transformational leadership is considered the most active and most effective process of leadership and is comprised of four behaviours: a) inspirational motivation, b) idealized influence, c) intellectual stimulation, and d) individual consideration. Inspirational motivation

involves forming a vision of a desirable future, articulating how the vision can be accomplished, and setting high performance standards. Idealized influence includes modeling behaviours that reflect the values and beliefs of the leader that are needed to accomplish the vision of the organization. Intellectual stimulation refers to behaviours that challenge followers to question their assumptions and find new creative and resourceful solutions to problems. Finally, individual consideration involves fostering personal growth by customizing followers' development according to their individual needs and abilities. In sum, transformational leadership involves "inspiring followers to commit to a shared vision and goals for an organization or unit, challenging them to be innovative problem solvers, and developing followers' leadership capacity via coaching, mentoring, and provision of both challenge and support" (Bass & Riggio, 2006, p.4). On a final note, it is important to highlight that although there are three distinct leadership processes, they are not mutually exclusive and leaders are assumed to use all three simultaneously. Optimal personal development is assumed when leaders display laissez faire leadership rarely, transactional leadership moderately, and transformational leadership frequently (Avolio, 2011).

Previous research on FRLM coaching behaviours has shown a wide range of positive athlete outcomes associated with transformational leadership. Specifically, coaches' transformational behaviours are related to lower athlete aggression (Tucker, Turner, Barling, & McEvoy, 2010), and higher athlete commitment (Saybani, Yusof, Soon, Hassan, & Zardoshtian, 2013), organizational citizenship behaviour (Lee, Kim, & Kang, 2013), extra effort (Arthur, Woodman, Ong, Hardy, & Ntoumanis, 2011), athlete well-being (Stenling & Tafvelin, 2014), team cohesion (Callow, Smith, Hardy, Arthur, & Hardy, 2009), athlete satisfaction (Rowold, 2006), and performance (Chou, Lin, Chang, & Chuang, 2013). Transactional and laissez faire

leadership have also been shown to be associated with athlete outcomes (Rowold, 2006). Specifically, Rowold found laissez faire leadership predicted lower athlete effort and satisfaction and transactional leadership predicted increased athlete effort.

Researchers have also begun to use the FRLM to specifically examine coaching and its relationship to positive developmental outcomes and negative experiences in sport (Vella, Oades, & Crowe, 2013a, 2013b). Vella et al. (2013a) found coaches' transformational leadership behaviours (i.e., idealized influence, intellectual stimulation, inspirational motivation, and individual consideration) were positively related with athletes' life skill development (i.e., personal and social skills, goal setting, initiative, and cognitive skills) and inversely correlated with negative sport experiences. Vella et al. (2013b) trained coaches on transformational leadership and found that athletes of trained coaches had more positive developmental outcomes and fewer negative experiences than athletes from untrained coaches. Although Vella and colleagues' research has made an important first step by showing links between FRLM coaching behaviours and athletes' positive developmental outcomes and negative experience, several limitations exist. Specifically, Vella et al. (2013a, 2013b) only assessed transformational coaching behaviour, and their findings were based on preliminary analytic procedures (i.e., descriptives and simple correlations).

As evidenced above, the FRLM has only recently begun to be explored in coaching research. Thus, in lieu of the noteworthy efforts of initial researchers, gaps in the existing literature remain, especially as it relates to positive developmental outcomes and negative experiences in sport. Specifically, a) positive development through sport research related to the FRLM has focused on youth cohorts, with none looking at older cohorts (i.e., university athletes), b) no studies to our knowledge have examined how all three FRLM processes relate to

positive developmental outcomes and negative experiences concurrently, and c) most studies examining how FRLM behaviors influence positive developmental outcomes and negative experiences in sport have relied on preliminary analyses. Systematic steps were taken to address the abovementioned gaps in the literature throughout this five article mixed methods dissertation.

Purpose

The purposes of this dissertation were a) to examine the correlational relationships between Canadian university athletes' perceptions of coach leadership behaviours and their perceptions of positive developmental outcomes and negative experiences related to university sport, and b) to explore how coach leadership behaviours and the associated developmental outcomes and negative experiences were described by both coaches and athletes.

Five research questions guided this dissertation: (a) Which reliable and valid positive developmental outcomes and negative experiences do athletes perceive to be attributed to their participation in university sport? (b) How do university coaches and athletes describe athletes' positive developmental outcomes and negative experiences related to university sport? (c) Which coach leadership behaviours do athletes perceive when coaches are targeting their positive developmental outcomes and experiences related to university sport? (d) What are the correlational relationships between athletes' perceptions of coach leadership behaviours and their perceptions of positive developmental outcomes and negative experiences in university sport? and e) How do university coaches and athletes describe coach leadership behaviours that target athletes' developmental outcomes and experiences related to university sport?

Pragmatism

The overarching epistemological principles of pragmatism were used to inform this five article dissertation and to answer the aforementioned research questions. Johnson and Onwuegbuzie (2004) affirm that pragmatism is a practical consequence-driven view that

attempts to understand and explain real world phenomena by selecting whatever combination of worldviews, philosophies, methods, and procedures provide the best explanation to the research questions at hand. Consequently, pragmatism is not committed to any one philosophy, world view, or reality (Creswell, 2014; Johnson & Onwuegbuzie, 2004). The aims of this five article dissertation were to explore the correlational relationships between coach leadership behaviours and athletes' positive developmental outcomes and negative experiences associated with university sport, as well as to provide context to coaches' leadership behaviours and athletes' positive developmental outcomes and experiences. A post-positivist worldview was used in Article One (Chapter Two) and Article Three (Chapter Four) to answer questions about the cross-sectional relationships amongst athletes' perceptions of coach leadership behaviours and athletes perceptions of positive developmental outcomes and negative experiences related to university sport. Post-positivism is the best option for answering quantitative research questions that seek to make generalizations (Creswell, 2014). In Article Two (Chapter Three), Article Four (Chapter Five), and Article Five (Chapter Six), a constructivist paradigm was used to understand the context surrounding coach leadership behaviours and athletes' positive developmental outcomes and negative experiences related to university sport (Creswell, 2014). Constructivism was the best option for exploring the unique processes and interactions that occurred between coaches and athletes within the context of Canadian university sport programs.

Method

According to Creswell (2014), a mixed methods design is appropriate when conducting research under a pragmatic world view because multiple methods of data collection and analysis are combined to provide a more complete understanding of the research questions. A multistage mixed methods design was used for this five article dissertation (Creswell, 2014). In Article One, a new reliable and valid measurement tool for assessing the positive developmental

outcomes and negative experiences related to university sport was created using two Pan-Canadian samples of university athletes. Article Two qualitatively explored the positive developmental outcomes that athletes perceived to be related to their participation in university sport. Article Three tests the correlational relationships between Canadian university athletes' perceptions of coach leadership behaviours and their perceptions of positive developmental outcomes and negative experiences related to university sport. In Article Four, athletes' perceptions of who (i.e., external assets) was responsible for their development within the university sport context was examined through a qualitative lens. Finally, Article Five qualitatively explored how coaches' created and maintained university sport programs that were recommended for targeting athletes' positive developmental outcomes.

The rationale for collecting both quantitative and qualitative data was to provide a more complete understanding of the relationship between athlete perceived coach leadership behaviours and athletes' positive developmental outcomes and negative experiences related to university sport (Bryman, 2006). Specifically, quantitative methods were used to confirm the reliability and validity of the measurement tools, and to assess which coach leadership behaviours were significantly related to athletes' positive developmental outcomes and negative experiences in university sport. Qualitative data complemented the quantitative findings by providing context to coach leadership behaviours and the positive developmental outcomes athletes experienced within a university sport setting. Further, qualitative results served as a form of data triangulation, and were used to compare and contrast our quantitative findings.

Post-positivism. A post-positivist world view was used to answer the proposed research questions in Articles One and Three. Post-positivists believe there are governing universal realities that regulate the world in which we live in (Creswell, 2014). However, post positivists

acknowledge that true reality can never be known for certain since all reality must be interpreted; thus, due to human error in interpretation, reality can only be known imperfectly and probabilistically. As such, post-positivists believe human knowledge is not based on unchallengeable truths, but rather upon human conjectures of truth which can be modified or rejected based on new knowledge (Creswell, 2014). Post-positivists attempt to explain these realties or truths by forming hypotheses or research questions about relationships of interest and evaluating them through controlled and careful observations and measurements of objective reality (Creswell, 2014). Post-positivist research primarily constitutes the use of quantitative measures for studying individuals' behaviors since the aim is to discover generalizable findings.

Constructivism. A constructivist world view was used to answer the proposed research questions in Articles Two, Four, and Five. Constructivists view reality as socially- and experientially-based mental constructions that are contextually specific in nature, may conflict with one another, and change as people become more informed or experienced (Creswell, 2014; Lincoln & Guba, 1985). Therefore, unlike post-positivists, who view human knowledge as conjectures of truth, constructivists believe knowledge is accumulated and ever-changing based on human interactions and social influences (Creswell, 2014; Lincoln & Guba, 1985). Research conducted within a constructivist paradigm often involves an open qualitative dialogue between researcher and participants with the goal of reconstructing the meaning of peoples' lived experiences (Creswell, 2014). Creswell noted a constructivist paradigm is useful for research projects that address processes of interaction amongst individuals within a specific context. Of note, in Article five an interpretivist methodology was used. Interpretivism is a specific methodology used under a constructivist world view (Crotty, 2011).

Data Collection

Data were collected over four stages. In Stage One, an online survey was used to collect data from a pan-Canadian sample of university athletes (September, 2014 – April, 2015). In Stage Two, semi-structured open-ended interviews were conducted with university athletes (May, 2015 – September, 2015). In Stage Three, semi-structured open-ended interviews were conducted with university coaches (May, 2015 – September, 2015). In Stage Four, an online survey was used again to collected data from a new independent pan-Canadian sample of university athletes (September, 2015 – April, 2016).

Stage One

Procedure. Prior to collecting data, approval was received from the University of Ottawa's Office of Research Ethics and Integrity (Appendix A). Coaches who represented university sport programs across Canada were contacted by email with a coach information letter (Appendix B). Within the coach information letter, coaches were asked to forward our athlete recruitment letter (Appendix C) to their eligible athletes. The athlete recruitment letter (Appendix C) described the purpose of the study and the methods of data collection. Those interested in participating were directed to our personal link on the Fluid Survey website where they could complete a consent form (Appendix D) that notified them of their right to anonymity and confidentiality. Specifically, they were informed that data would be acquired from multiple universities simultaneously, would be analyzed and reported at a group level, and collapsed across programs in order to protect the confidentiality of any one program or school. After providing informed consent, athletes were directed to our online survey where they completed a demographic questionnaire (Appendix E) and answered questions regarding their perceptions of positive developmental outcomes and negative experiences (Appendix F) and coach leadership behaviours (appendix G) within the context of university sport. Finally, athletes had the option to

volunteer (Appendix H) to be contacted for Stage Two and Stage Four of this dissertation and to recommend coaches to be contacted (Appendix I) for Stage Three.

Quantitative Measures. The quantitative survey at Stage One consisted of two sub-surveys: A modified version of the Youth Experience Survey 2.0 (YES 2.0; Hansen & Larson, 2002), and the Multifactor Leadership Questionnaire (MLQ-5X; Avolio & Bass, 2004). The YES 2.0 is a widely used measurement tool for assessing life skill development expriences in and outside of sport (Gould & Carson, 2008). The YES 2.0 has 70 items designed to measure six identity experiences, 12 initiative experiences, ten basic skills experiences, eight interpersonal relationship experiences, ten teamwork and social skills experiences, seven adult networks and social capital experiences, and 17 negative experiences in structure activities (i.e., stress, negative peer influences, social exclusion, negative group dynamics, inappropriate adult behaviour). However, for this dissertation, the YES 2.0 was modified and the final item pool had 99 items across 11 dimensions consisted (Appendix F). For details on the modifications to the YES 2.0 see Article one (Chapter Two).

The MLQ-5X (Avolio & Bass, 2004) is the most popular measurement tool for assessing FRLM leadership behaviours, and was used to measure athletes' perceptions of their coaches' leadership behaviours (Appendix G). The MLQ-5X is a 45-item scale with 25 transformational, 15 transactional, and five laissez faire items (see Avolio & Bass, 2004 for a summary of each individual item). Importantly, due to licensing agreements, adapting the MLQ-5X items was prohibited.

Participants. A total of 628 athletes participated in Stage One. To ensure they were representative of the typical Canadian university student athlete, participants needed to be a) between the ages of 17-25 and b) a member of a competitive university sport team (i.e., varsity

or competitive club). Fourteen athletes were older than 25 and their data were removed. Participants were also screened to ensure they had sufficient interactions with their coaches using three questions that asked about the frequency to which they interacted with their coach in games, practices, and outside of sport (Appendix E). The three questions were measured on a 5 point Likert scale ranging from 1 'Never' to 5 'All the time'. Athletes had to indicate a 3 or above on at least one of the three questions to be eligible. Seven athletes were removed for having insufficient interactions with their coach.

The final sample consisted of 605 athletes (237 male, 368 female; M_{age} = 20, SD = 1.74) from 205 different teams. Athletes represented 47 Canadian universities and all were registered in full time studies. The athletes competed in 26 different university sports, 373 were members of CIS teams and 232 were members of competitive club teams sanctioned by conference or provincial organizations (e.g., Ontario University Athletics). Soccer was the most represented sport (20%), followed by rugby (14%), rowing (13%), cross country (9%), track and field (5%), basketball (5%), lacrosse (5%), and volleyball (5%). The remaining 18 sports were represented in less than five percent of the data. In total, 201 first year, 178 second year, 110 third year, 69 fourth year, and 47 fifth year student-athletes participated. Within their teams, 369 athletes held starting positions, 157 were non-starters, 29 were practice team members, and 50 athletes did not know their player status.

Stage Two

Procedure. After approval to conduct the proposed research was granted by the University of Ottawa's Office of Research Ethics and Integrity (Appendix J), eligible athletes were contacted by email with a recruitment script (Appendix K) that informed them of the purpose of the study and the methods of data collection. The primary researcher conducted individual semi-structured interviews with the university athletes. Each participant selected the

time and location of their interview. Those interested in participating were sent via email a consent form (Appendix L) notifying them of their right to confidentiality and anonymity. Specifically, they were informed that all names and information discussed during the interview that may indicate their identity such as their location or affiliation to schools would be modified or excluded when reporting any findings. After providing consent, athletes completed a demographic questionnaire (Appendix M).

Participants. Data from Stage One were used to select athletes for Stage Two. To be eligible for this study, athletes' data were screened to ensure (a) they were a member of a CIS sanctioned team and that (b) they had indicated in Stage One that they were willing to be contacted for Stage Two, and (c) they perceived high instances of positive developmental outcomes attributable to varsity sport. With respect to the latter criterion, athletes needed to have an average score of five or above (out of seven) on the six positive categories of the modified YES 2.0 (Appendix F) in Stage One. This ensured there was evidence that athletes experienced positive development before exploring how such development was fostered within university sport settings.

Following screening, 34 athletes met the criteria and 15 agreed to participate (5 male, 10 female; M_{age} = 21.73, range = 17-26, *SD* = 2.71). Athletes were from 12 universities, across six Canadian provinces (i.e., Ontario, Quebec, New Brunswick, Saskatchewan, Alberta, and British Columbia). All athletes were registered in full time studies and represented different sports: cross country (*n* = 3), soccer (*n* = 3), ice hockey (*n* = 2), rugby (*n* = 2), volleyball (*n* = 2), curling (*n* = 1), football (*n* = 1), and track and field (*n* = 1). The sample consisted of three first-year, two second-year, four third-year, one fourth-year, and five fifth-year eligible student-athletes.

Interview. Prior to the interviews, the interviewer built rapport by explaining the process of the interview and by discussing athletes' views on university sport. Data were collected using a qualitative semi-structured open-ended interview format. This type of interview technique has been employed by many researchers as the main technique for studying coach behaviours (e.g., Coté, Salmela, Trudel, & Baria, 1995; Vallée & Bloom, 2005), likely because they are similar in style to an ordinary conversation with the interviewee doing most of the talking (Lincoln & Guba, 1985). This format allowed the interviewer to focus the topic of discussion but afforded the interviewee the freedom to answer openly without restrictions (Rubin & Rubin, 1995). It was advantageous for interviewees to answer without restriction so they could dictate which subject matter was most important to them.

A six-section athlete interview guide (Appendix N) was created by the primary researcher. All athletes were interviewed using the same athlete interview guide in order to ensure consistency. The interview guide was piloted with two CIS athletes. The pilot interviews were recorded and reviewed to ensure the interview questions (a) were understood by athletes, (b) allowed athletes to elaborate on their positive developmental outcomes related to university sport in detail, and (c) allowed athletes to differentiate amongst their positive developmental outcomes. To help discriminate among the developmental outcomes, we refined questions to be more open-ended and used colloquial language.

The first section of the interview guide introduced the topic and initiated discussion (e.g., Briefly describe what it means to you to be a varsity athlete). The second section addressed positive developmental outcomes related to university sport, which were informed by the six positive categories of the YES 2.0 (Hansen & Larson, 2005). These questions were framed in colloquial terms. For example, to capture identity, we asked: "Have you had experiences that

have allowed you to get to know or to think about who you are?" Since our focus was on the positive developmental outcomes, we did not ask about each of the individual negative experience categories. Instead, we asked about any negative experiences with a broad open-ended question (e.g., Have you experienced challenges or issues related to being a university athletes).

The third section was designed to identify the agents responsible for athletes' development. In this section, questions were purposefully phrased to allow athletes to either take responsibility or to assign responsibility for their development to others. For instance, athletes were asked "Where did you learn this? Was this outcome self-initiated, or did you learn it from others?" If athletes mentioned someone who influenced their development, they were then probed about how that person influenced their development (e.g., How did this person influence your development?). Athletes were then probed about whether they felt anyone else helped shape their development (e.g., Did anyone else have an influence?). This process continued until all influential agents were exhausted. If the coach had not been mentioned after naming all relevant influences, the interviewer probed the respondent about the role of their coach (e.g., What about your coach? Did he/she have an influence?).

The fourth section had questions related to transfer. Whenever participants described experiences, qualities, skills, or relationships acquired as a result of university sport, they were specifically questioned as to how each outcome influenced their lives outside of sport (e.g., Do you use this skill outside of sport?). The fifth section was designed to identify the agents responsible for facilitating athletes' transfer of developmental outcomes from sport to life (e.g., Did anyone teach you to use this skill outside of sport?). Just like in section three, if athletes mentioned someone who influenced transfer, they were probed about how that person's

influence (e.g., How did this person influence your ability to transfer this skill?). Athletes were then asked whether they felt anyone else helped them transfer skills or translate developmental outcomes from sport to life. Once again, this process continued until all influential agents were exhausted. If the coach was not mentioned after naming all relevant influences of transfer, the interviewer probed the respondents about the role of their coach (e.g., Did your coach play a role in your use of this skill outside of sport?). The sixth section contained concluding questions which gave athletes opportunity to include additional information they believed relevant or missing from the interview guide.

Stage Three

Procedure. After approval to conduct the proposed research was granted by the University of Ottawa's Office of Research Ethics and Integrity (Appendix J), eligible coaches were contacted by email with a recruitment script (Appendix O) that informed them of the purpose of the study and the methods of data collection. The primary researcher conducted individual semi-structured interviews with the university coaches. Each coach selected the time and location of the interviews. Those coaches interested in participating were sent via email a consent form (Appendix P) notifying them of their right to confidentiality and anonymity. After providing consent, coaches completed a demographic questionnaire (Appendix Q).

Interview. Data were collected using a qualitative semi-structured open-ended interview format. A six-section coach interview guide (Appendix R) was created by the primary researcher. All coaches were interviewed using the same coach interview guide. The interview guide was piloted with one CIS coach. The pilot interview was recorded and reviewed to ensure the interview questions (a) were understood by the coach, (b) allowed the coach to elaborate on their athletes' positive developmental outcomes that they believed were related to university sport in detail, and (c) allowed coaches to differentiate amongst the positive developmental

outcomes afforded to their athletes. To help discriminate among the developmental outcomes, we refined questions to be more open ended and used colloquial language.

The final interview guide (Appendix R) consisted of six sections that had the exact same questions and probing protocol as described in Stage Two with the university athletes. The only difference between the coach interview guide (Appendix R) and the athlete interview guide (Appendix N) was minor edits to phrasing of questions to account for differences in position and view point. For example, in the athlete interview guide (Appendix N), athletes were asked "As a result of your experience in university sport, have you had experiences that allowed you to get to know or to think about who you are?" In the coach interview guide (Appendix R), coaches were asked the same question, but this time it was framed to capture the view point of a coach "As a result of their participation in university sport, have your athletes been afforded experiences that allowed them get to know or to think about who they are as a person?" Just like in Stage Two, subsequent probing was pursued to ensure that coaches illustrated specific examples relating to their athletes, with specific lived experiences in their program.

Participants. Data from Stage One were used to identify the coaches in this study. Specifically, athletes were asked if they would like to recommend coaches who were known for investing time and effort in developing their athletes' life skills (Appendix I). Athletes in Stage One identified 315 coaches and the 20 most recommended coaches were contacted via email and asked to participate in Stage Three.

Fourteen coaches agreed to participate (nine male and five female). The coaches averaged of 46.38 (*SD* = 8.23) years of age, had an average of 22.85 years (*SD* = 8.65) of coaching experience across their lifespans and averaged 11.50 years (SD = 8.53) with their current university team. The participants coached at 10 different universities across Canada, and

coached six different types of sport: rugby (*n* = 4), cross-country/track and field (3), swimming (*n* = 2), soccer (*n* = 2), volleyball (*n* = 2), and golf (*n* = 1). Thirteen coaches worked for CIS sanctioned teams (i.e., varsity), and one worked on a competitive club team (i.e., athletes compete for their university but do not have varsity sanction). One coach held a high school diploma, three had bachelor's degrees, six had master's degrees, and three had a Ph.D. Aside from one coach, all of the participants held advanced national coaching certification from Canada's National Coaching Certification Program.

Stage Four

Procedure. Prior to collecting data, approval was received by the University of Ottawa's Office of Research Ethics and Integrity (Appendix S). University sport coaches were contacted by email with a coach information letter (Appendix T) and were asked to forward our athlete recruitment letter (Appendix U) to their eligible athletes. The athlete recruitment letter described the purpose of the study and the methods of data collection. Athletes interested in participating were directed to our personal link on the Fluid Survey website where they completed a consent form (Appendix V) notifying them of their right to anonymity and confidentiality. After providing informed consent, athletes were directed to our online survey where they could complete the same demographic questionnaire (Appendix E) described in Stage One.

Measures. This new independent sample of athletes completed the same modified version of the Youth Experience Survey 2.0 (Hansen & Larson, 2002) as described in Stage One (Appendix F).

Participants. 554 athletes completed the online survey. To ensure they were representative of the typical Canadian university student athlete, participants needed to a) be between the ages of 17-25 and b) be a member of a competitive university sport team, and (c)

had not participated in Stage One. Data from 56 athletes were eventually removed because they had participated in Stage One.

The final sample included 498 competitive athletes (172 male, 326 female; M_{age} = 20.04, range = 17-25, *SD* = 1.84) registered as full time students at 39 different Canadian universities. Athletes competed in 27 different university sports and were all members of CIS teams (*n* = 311), or teams sanctioned by conference or provincial organizations (*n* = 187). Soccer was the most represented sport (15%), followed by volleyball (11%), rowing (10%), rugby (9%), track and field (7%), cross country (7%), basketball (5%), and ice hockey (5%). An additional 19 sports were represented by less than five percent of the data. The total sample consisted of 200 first year, 120 second year, 90 third year, 61 fourth year, and 27 fifth year student athletes, comprising 304 starters, 119 non-starters, 37 practice team members, and 38 athletes who did not know their playing status.

How Data from Each Stage Were Used Across Studies

Article One (Chapter Two). Data from Stage One and Stage Four were used to modify and confirm the reliability and validity of a new measurement for assessing positive developmental outcomes and negative experiences related to university sport.

Article Two (Chapter Three). Qualitative data from Stage Three were used to qualitatively explore athletes' perceptions of the nature of developmental outcomes associated with their participation in university sport, as well as their perceptions of transfer.

Article Three (Chapter Four). Quantitative data from Stage One were used to assess the cross-sectional relationships between coach leadership behaviours and athletes' perceived developmental outcomes and negative experiences in university sport.

Article Four (Chapter Five). Data from Stage Three were used to qualitatively assess athletes' perceptions of who was responsible for their positive development within the university sport context, and covers topics related to both self-and social agency.

Article Five (Chapter Six). Data from Stage Four were used to qualitatively explore coaches' perceptions of their athletes' positive development through university sport, including how they constructed university sport programs that were recommended for promoting positive development.

Chapter Two

Article One

Rathwell, S., & Young, B. W. (2016). An examination and validation of an adapted youth experience scale for university sport. *Measurement in Physical Education & Exercise Science*, *20*(4), 208-219. doi: 10.1080/1091367X.2016.1210152

Abstract

Limited tools assess positive development through university sport. Such a tool was validated in this investigation using two independent samples of Canadian university athletes. In Study one, 605 athletes completed 99 survey items drawn from the YES 2.0. Separate a priori measurement models were evaluated (i.e., 99 items, YES 2.0, YES-S). Confirmatory factor analysis (CFA) and Exploratory Structural Equation Modeling (ESEM) results indicated issues with model fit. Post-hoc modifications improved fit, resulting in a 46 item, 9-factor model with five positive and four negative dimensions. In Study two, 511 athletes completed the same items. The resultant model was confirmed using both CFA (CFI = .911, SRMR = .056, RMSEA = .040) and ESEM (CFI = .956, SRMR = .023, RMSEA = .034). The resultant University Sport Experience Survey provides a reliable and factorially-valid instrument for measuring development in university sport.

Keywords: Confirmatory Factor Analysis; Exploratory Structural Equation Modeling; Measurement; Reliability; Validity

Contemporary approaches in sport psychology have adopted strength-based methods for facilitating positive development (Danish, Petitpas, & Hale, 1993). This type of approach has been exemplified in the popular wave of research in Positive Youth Development (PYD) (Lerner, Almerigi, Theokas, & Lerner, 2005), and life skills development (Gould & Carson, 2008). Life skills are ‘‘skills that enable individuals to succeed in the different environments in which they live, such as school, home, and in their neighborhoods. Life skills can be behavioral (communicating effectively with peers and adults) or cognitive (making effective decisions); interpersonal (being assertive) or intrapersonal (setting goals)’’ (Danish, Forneris, Hodge, & Heke, 2004, p. 40). Today, many youth sport organizations have life skill development as a primary goal. Although not voiced as popularly in the sport psychology literature, the contention that university sport programs can stimulate positive development and inculcate life skills also exists (Broughton & Neyer, 2001; Jones & Lavalée 2009; Vallée & Bloom, 2005).

Based on their synthesis of PYD literature, Gould and Carson (2008) advocated for the use of the Youth Experience Scale (YES 2.0; Hansen & Larson, 2005), contending that it assesses pertinent themes related to positive developmental outcomes and negative experiences in sport. Four notable versions of the YES survey have been employed for assessing PYD. The original YES 1.0 (Hansen & Larson, 2002) was an 89 item self-report measure that assessed the positive and negative developmental experiences of high school students within many structured activities (e.g., academic clubs, faith-based groups) including sport. It included 11 measures that assessed six positive development outcomes (i.e., identity experiences, initiative experiences, basic skills, interpersonal relations, teamwork and social skills, adult networks and social capital), and five negative experiences (i.e., stress, negative peer influences, social exclusion,

negative group dynamics, inappropriate adult behaviour). Hansen and Larson's (2005) current version of the YES 2.0, is a revised version of the YES 1.0 that assesses the same 11 measures described above, but with 19 fewer items. Hansen and Larson altered the YES with the intention of having a shorter scale with stronger psychometric properties. However, Hansen and Larson a) provided little information on the process of how they eliminated items, and b) did not follow sound psychometric procedures, such as comparing model fit between the YES 1.0 and the YES 2.0 after the 19 items were removed.

In recent years, shorter versions of the YES have shown some promise for assessing youth athletes' sport experiences (see MacDonald, Côté, Eys, & Deakin, 2012; Sullivan, LaForge-Mackenzie, & Marini, 2015). MacDonald and colleagues (2012) explored the psychometric properties of the YES 2.0 in the youth sport domain. The YES factor structure was not supported, exploratory analyses were performed, and a modified version entitled the Youth Experience Scale for Sport (YES-S) resulted. The YES-S has 37 items that measure four dimensions of positive experiences (i.e., personal and social skills, initiative, goal setting, cognitive skills) and one dimension of negative experiences related to youth sport (MacDonald et al., 2012). Sullivan et al. (2015) provided initial confirmation of the factor structure of the YES-S with a sample of 350 youth team sport athletes. However, they were required to trim a significant number of items to satisfy model fit criteria, resulting in a 22 item Short Form YES-S.

All research that has examined YES based outcomes in sport has looked at adolescent populations (e.g., Gould & Carson, 2011; Wilkes & Côté, 2010), or younger (e.g., MacDonald et al., 2012; Sullivan et al., 2015), with no research focusing on the assessment of developmental outcomes and experiences in emerging adults. Spanning from 18 to 25 years of age, emerging

adulthood coincides with the typical age range of university athletes, and is characterized as a time period where emerging adults gain independence from parents and explore new opportunities and possible identities (Arnett, 2000, 2006). There are important reasons, however, why such a reliable assessment tool is required with respect to emerging adult sport cohorts. First, in contemporary literature, emerging adulthood is not necessarily characterized as a strict departure from youth, but rather as a transitional period between youth and full adulthood (Arnett, 2000, 2006). In keeping with such a transitional period, emerging adulthood is noted as a period of substantial growth, independence, and personal and socio-emotional development (Arnett, 2000).

Second, governing bodies for university sport programs claim that competitive intercollegiate athletics are a context where athletes experience positive development. For instance, the mission of Canadian Interuniversity Sport (CIS), the governing body of Canadian university sport, is to "inspire Canada's next generation of leaders through excellence in sport and academics" (CIS, 2013, p.10). Likewise, the National Collegiate Athletic Association (NCAA), the governing body of university sport in the United States of America, describe themselves as a membership-driven organization dedicated to safeguarding student-athletes' wellbeing and equipping them with the skills to succeed on the playing field, in the classroom and in life (NCAA, 2015). Currently, no measurement tool exists that focuses specifically on notions of positive development within the university sport domain. Thus, there a need to refine assessment tools that can document the outcomes as youth transition from youth to emerging adults during their university years as student-athletes. The current study attempted to examine

whether YES inventories used for assessing development through youth sport could also reliably and validly measure development that arises from university sport.

Third, recent qualitative research suggests university coaches adhere to schools' mission statements and deliberately incorporate athletes' personal, academic, and social development into their coaching philosophies (Flett, Gould, Paule, & Schneider, 2010; Rathwell, Bloom, & Loughead, 2014). For example, in Flett and colleagues' (2010) study, university coaches emphasized that academics were crucial to university sport, felt player development was inseparable from academic achievement, and believed it was their responsibility to provide the necessary structure and support to foster their players' personal and academic development. Despite sport organizations' mission statements and coaches' claims about the priority given to personal and socio-emotional development (Flett et al., 2010; Rathwell et al., 2014), little empirical evidence exists for which developmental outcomes are most prominently associated with university sport participation, and the degree to which developmental outcomes are influenced by such participation.

Finally, from a conceptual standpoint, YES outcomes that relate to characteristics such as development of identity, initiative, emotional and cognitive regulation, and social competencies, to name a few, align well with many proposed markers of positive development in emerging adulthood. For instance, the YES identity construct measures individual's reflection and exploration related to their identity, which appears pertinent considering emerging adulthood is "the age of identity explorations" (Arnett, 2006, p. 6) characterized by unparalleled freedom to experiment with different positions of responsibility, occupational, and interpersonal roles. The YES construct of initiative measures planning elements related to goal setting, time management,

and effort which appear relevant as emerging adults learn to navigate differentiated but potentially competing roles (e.g., being a serious university student and a competitive athlete). The ability to plan has been highlighted as necessary for the successful transition into adulthood (Maten et al., 2004). Other important development markers in emerging adulthood include social competencies (Hawkins et al., 2009) and learning how to recruit and negotiate support from non-parental adults (Maten et al., 2004). Measurable constructs in the YES, such as the teamwork and social skills construct appear pertinent for capturing the skills needed to work with others and to adopt new leadership responsibilities. Moreover, the YES constructs related to interpersonal relationships and adult networks and social capital both capture broader aspects of social networking and community integration that may be critical for student-athlete populations.

The purpose of this investigation was to explore the utility of YES based measures for assessing positive development in emerging adult competitive sport cohorts using two independent samples of Canadian university athletes. This investigation spanned two years, involving separate studies of the independent samples one year apart. In pursuit of our goal, we saw great merit in following the precedence of MacDonald and colleagues (2012), which was to begin by examining an established inventory containing a broad scope of positive developmental outcomes in a sport specific domain. In addition, we saw virtue in systematically testing the alternative versions of the YES inventory (YES 2.0, and YES-S) as nested structural models. Validating a preliminary assessment tool would not only facilitate research by determining an initial pool of developmental outcomes that are reliably and validly captured within university sport, but would provide a solid first step toward the long term goal of establishing an acceptable

survey to help researchers, university administrators, athletic directors, and coaches assess their success in facilitating positive development.

Study One

Method

Recruitment. Prior to collecting data, approval was received from the host university's research ethics and integrity office. To recruit participants, e-mail invitations describing the purpose, procedures, and potential benefits of this study were sent to head coaches. Coaches were asked to disseminate a recruitment letter to their athletes describing the purpose of the study and methods, and directed them to our website where they completed a consent form, demographic questionnaire, and answered survey questions about perceptions of personal and socio-emotional development resulting from their university sport experience.

Participants. Study one included 605 competitive athletes (237 male, 368 female; M_{age} = 20, range = 17-25, *SD* = 1.74) from 47 universities across Canada. Athletes competed in 26 different university sports and were all members of CIS teams (*n* = 373), or teams sanctioned by conference or provincial organizations (e.g., Ontario University Athletics) (*n* = 232). All athletes were registered in full time studies. Soccer was the most represented sport (20%), followed by rugby (14%), rowing (13%), cross country (9%), track and field (5%), basketball (5%), lacrosse (5%), and volleyball (5%). The remaining 18 sports represented less than five percent of the data. The total sample consisted of 201 first year, 178 second year, 110 third year, 69 fourth year, and 47 fifth year student athletes, comprising 369 individuals in starting roles, 157 non-starters, 29 practice team members, and 50 athletes who did not know their playing status.

Survey Measures. University athletes' perceived development resulting from university sport was assessed using a modified version of the YES. Prior to administration, a team of six sport psychology researchers met to discuss the scope, structure, and wording of Hansen and Larson's (2005) 70 YES 2.0 items. During the discussion, the team considered that the YES 2.0 (Hansen & Larson, 2005) was a modified version of the YES 1.0 (Hansen & Larson, 2002), and that during Hansen and Larson's modification process, YES 1.0 items had been removed. Since the developmental experiences of university aged athletes could be broad and were unknown at the time, and more advanced statistical procedures for assessing factorial validity have become common practice since Hansen and Larson's (2005) study, we judged that it would be important to assess the widest range of developmental experiences possible from the pertinent existing surveys. With this in mind, the sport psychology researchers consulted the YES 1.0 (Hansen & Larson, 2002) and re-integrated any item that (a) was not present on the YES 2.0, and (b) was deemed relevant to the experiences of university athletes. To assess relevance of the YES 1.0 items to university athletes' experiences, the six sport psychology researchers asked themselves whether each item could relate to the experience of a university athlete. A consensus was reached that all of the 19 items that were present on the YES 1.0, but were not found on the YES 2.0, could relate to the experiences of university athletes. Thus, all 19 items were integrated accordingly.

Upon inspecting our survey items, the team of researchers noted some items contained multiple themes. Multiple themed items were separated to ensure each theme was represented individually. For example, a single item about experiences relating to creative/artistic skills, was split into two separate items: one measuring creative skills, and a second measuring artistic

skills. Six items were added by splitting items. The research team also agreed the community involvement dimension of the YES 2.0 (Hansen & Larson, 2005) could be further developed for university athletes. Specifically, the items "got to know people in the community" and "came to feel supported by the community" were posed to ask about athletes' on-campus community and off-campus community. Finally, for psychometric purposes, a third item was added for each of the on- and off- campus community themes, asking for a response to "I feel a part of my (on/off) campus community." This process resulted in four additional items. In sum, the final item pool consisted of all of the original 70 YES 2.0 items, 19 re-integrated YES 1.0 items, and ten newly created items. Our final survey pool had 99 items intended to load onto 11 factors. For the remainder of this paper, we will refer to the complete 99 item survey as the 99 item YES.

To evaluate athletes' perceived personal and socio-emotional development *resulting from* their experience in university sport, the stem for all items was changed from "Based on your current or recent involvement, please rate whether you have had the following experiences in [name of activity]" (Hansen & Larson, 2005), to "As a result of my involvement in university sport." In addition, while keeping the same content for each item, the wording was altered to measure perceived development. For example, "I set goals for myself in this activity" (i.e., a perceived experience in an activity), was changed to "I am better at setting goals for myself" (i.e., a perceived development from an activity). Minor changes were also made when items conflicted with the age and experience of our cohort. For example, "This activity helped prepare me for college," was changed to "I feel more prepared for life after graduation." Participants responded to items on a 7-point Likert scale ranging from 1 (*Strongly disagree)* to 7 (*Strongly*

agree). This seven point Likert scale was chosen over Hansen and Larson's (2005) 4-point scale to guard against kurtosis and ensure more normal distributions (Kline, 2010).

Following all changes, the wording and readability of the 99 items and their face validity with respect to the 11 factors (i.e., overarching developmental outcomes) were assessed by the six sport psychology researchers. All six researchers felt that all items were easy to understand and that each item was consistent with their respective factors. Moreover, the final pool of survey items was piloted with 14 university athletes to ensure (a) the language and content of items were appropriate and reflected the experiences of university athletes, and (b) that all survey questions and instructions were understood. The athletes reported no issues.

Data Analysis. Using the Mplus software program (Muthén, L. K., & Muthén, B. O., 2012), we used Confirmatory Factor Analyses (CFA) and Exploratory Structural Equation Modeling (ESEM) to evaluate model fit for multiple nested measurement models: the 99 item YES; the YES 2.0 (Hansen & Larson, 2005); the YES-S (MacDonald et al., 2012). We used a robust maximum likelihood estimator (MLR) for both CFA and ESEM analyses. MLR produces both standard errors and tests of model fit. With regard to ESEM, an oblique geomin rotation with an epsilon value of 0.5 was used (Muthén, L. K., & Muthén, B. O., 2012). Various indices were used to assess model fit: Comparative Fit Index (CFI), Standardized Root Mean Square Residual (SRMR), Root Mean Square Error of Approximation (RMSEA), and the normed chi-square (χ^2/df). Hair et al. (2010) suggest good model fit is reached if: CFI $\geq$ 0.90, SRMR $\leq$ 0.08, RMSEA $\leq$ 0.05, and $\chi^2/df \leq 5$.

Results

Preliminary Analyses

Only 0.36% of the data were missing. When less than 5% of data are missing, influences of missing data are negligible (Tabachnick & Fidell, 2013). Missing data were treated with multiple imputations using an expectation-maximization method (Tabachnick & Fidell, 2013).

CFA

Since hypothesized structures representing YES items existed, CFAs were conducted to test a priori structures against the data. CFAs test the hypothesis that a specific number of factors are explained by a specific number of indicators. In CFA analyses, each item is only allowed to load onto one factor, and all non-intended item loadings are constrained to zero. We conducted CFAs on the multiple nested measurement models: the 99 item YES; the YES 2.0; the YES-S. Summary statistics for the CFA on the 99 item YES (99 items and 11 factors) indicated issues with model fit: CFI = .746, SRMR = .065, RMSEA = .048 (90% *CI* = .047– .049), and χ^2/df = 2.379. Since 29 items were added to the original 70 items from the YES 2.0, it was possible that the model fit may have been compromised. Therefore, a CFA was also performed on the YES 2.0 (70 items and 11 factors). Summary statistics indicated issues with model fit: CFI = .789, SRMR = .064, RMSEA = .049 (90% *CI* = .047 – .050), and χ^2/df = 2.438. Finally, the factor structure of the YES-S (37 items and five factors) was tested. Summary statistics indicated that model fit also fell short of acceptable criteria: CFI = .862, SRMR = .056, RMSEA = .049 (90% CI = .045 – .052), and χ^2/df = 2.424.

ESEM

In recent years, the use of CFAs for evaluating complex survey data has been criticized for being too restrictive, resulting in poor item level factor structures, and producing multicollinearity amongst factors (Marsh, Morin, Parker, & Kaur, 2014). ESEM provides an

alternative approach that also provides parameter estimates, goodness-of-fit statistics, and standard errors (Marsh et al., 2009). Further, ESEM overcomes many of the issues with CFA by allowing cross loadings to be freely estimated. Thus, we also used ESEM to evaluate the nested measurement models: the 99 item YES; the YES 2.0; the YES-S. Marsh et al. (2014) have recommended using both CFA and ESEM approaches and comparing the results of the two.

The following criteria were used for all ESEM analyses: a) each item must have a primary factor loadings (i.e., items load on their intended factor) of .32 or greater (≥10% overlapping variance), and b) each item must not have cross loadings greater than .32 on unintended factors (Tabchnick & Fidell, 2013). For the 99 item YES, we hypothesized that responses to the 99 items would be explained by 11 correlated factors. Summary statistics showed improved fit from the CFA, however, issues still existed: CFI = .868, SRMR = .027, RMSEA = .038 (90% *CI* = .037– .040), and χ^2/df = 1.882. Further, inspection of the factor loadings showed inconsistencies between the hypothesized structure and the data. Please refer to the ESEM post-hoc modifications section for details.

For the YES 2.0, we hypothesized that responses to the 70 items would be explained by 11 correlated factors. Summary statistics showed good model fit: CFI = .916, SRMR = .025, RMSEA = .036 (90% *CI* = .034– .038), and χ^2/df = 1.769. However, inconsistencies existed between the hypothesized structure and the data. Specifically, multiple items intended to represent the identity factor cross-loaded above .32 on the initiative factor. Further, basic skills items cross-loaded above .32 on the interpersonal relationships factor. Finally, two factors were uninterpretable and were represented by only one item that loaded above a .32. Thus, results

showed that although the 11 factor ESEM model fit the data, the a priori YES 2.0 factor structure was not well represented.

For the YES-S, we hypothesized that responses to the 37 items would be explained by 5 correlated factors. Summary statistics indicated good model fit: CFI = .936, SRMR = .029, RMSEA = .037 (90% *CI* = .033– .041), and χ^2/df = 1.833. However, the data did not fit the hypothesized factor structure. Specifically, the data loaded onto four factors instead of five, leaving one factor with zero items loading above .32. These results suggest that the ESEM model fit the data, but the hypothesized YES-S facture structure was not supported.

ESEM Post-Hoc Modifications

Since the factor structure of the 99 item YES, the YES 2.0, and the YES-S were not supported using either CFA or ESEM methods, we sought to explore a factor structure that a) was consistent with the conceptual basis of Hansen and Larson's (2005) developmental themes and their hypothesized factor structure, b) maximized the number of items retained, and c) showed good fit to the data. To do so, we begun by inspecting the ESEM results for the 99 item YES for inconsistencies between the hypothesized structure and the data.

Upon inspection, two factors were uninterpretable; specifically, the items related to identity and negative group dynamics did not converge in an interpretable way on their own hypothesized factors. Instead many identity items cross-loaded above .32 on the factor representing initiative items. Likewise, many negative group dynamics items cross-loaded above .32 on the factor representing inappropriate adult behavior items. Taken together, the results suggested that the data would be better represented by a nine factor model that did not include identity and negative group dynamics items.

After removing identity and negative group dynamics, a 9 factor 85 item model was tested. Model fit was only improved by a marginal amount (e.g., CFI =.869). However, the factor structure was more readily interpretable and aligned more with the a priori structure hypothesized by Hansen and Larson (2005). The next step in our modification process involved removing items that cross-loaded above .32 on unintended factors, starting with the items with the highest cross-loadings. Items were removed one at a time and the model was retested after each removal. The purpose of removing items with high cross-loadings on unintended factors was to safeguard Hansen and Larson's (2005) hypothesized structure, while improving the interpretability of the factor structures and model fit. In the final phase of data trimming, we removed any items that loaded below .32 on their intended factors. The only exception to this rule was the item SE3 ("I am frequently exposed to social cliques"), which had a loading of .219 on social exclusion. SE3 was kept because its removal would have caused the social exclusion factor to have less than three items, which can result in model identification problems (Hair et al., 2010). Although SE3 loaded below .32, it loaded significantly on the social exclusion factor.

The iterative process of testing and removing items for violating loading criteria resulted in an additional 39 items being removed. The resulting model was a 9-factor 46 item solution that surpassed all criteria for excellent fit: CFI = .967, SRMR = .029, RMSEA = .035 (90% *CI* = .025 – .033), and $\chi^2/df = 1.516$. All factor loadings were significant, and all loadings except item SE3 (.219) were above .32 (range = .59 – .86) on their intended factor. No items loaded above .32 on unintended factors. All construct reliability (CR) scores were above .7, except for the factor that represented negative peer interactions, which had a CR score of .67. CR scores above

.7 indicate strong internal consistency reliability, while CR scores between .6 and .7 indicate adequate internal consistency reliability (Hair et al., 2010).

The descriptives for each scale of the resulting model were as followed: Initiative (*M* = 5.56, *SD* = 1.25, *Skewness* = -1.06, *Kurtosis* = .87), Basic Skills (*M* = 3.93, *SD* = 1.64, *Skewness* = -.08, *Kurtosis* = -.84), Interpersonal Relationships (*M* = 5.13, *SD* = 1.40, *Skewness* = -.79, *Kurtosis* = .26), Teamwork and Social Skills (*M* = 5.70, *SD* = 1.12, *Skewness* = -1.05, *Kurtosis* = 1.40), Adult Network and Social Capital (*M* = 4.77; *SD* = 1.53, *Skewness* = -.39, *Kurtosis* = -.49), Stress (*M* = 4.20; *SD* = 1.85, *Skewness* = -.28, *Kurtosis* = 1.09), Negative Peer Interactions (*M* = 2.07, *SD* = 1.53, *Skewness* = -1.42, *Kurtosis* = .94), Social Exclusion (*M* = 2.91, *SD* = 1.76, *Skewness* = .60, *Kurtosis* = -.86), and Inappropriate Adult Behavior (*M* = 2.18, *SD* = 1.58, *Skewness* = 1.58, *Kurtosis* = 1.05).

Study One Discussion

In Study one, we tested the psychometric properties of various nested models for personal and socio-emotional developmental outcomes in a Canadian university setting. Each model borrowed from the YES survey (Hansen & Larsen, 2002, 2005), including a recent sport version (MacDonald et al., 2012). Our goal was to obtain a reliable and structurally-sound survey instrument that was specific to both the domain of sport and the emerging adult age-cohort in its assessment of developmental outcomes. The initial CFA and ESEM results did not support any of the proposed factor structures, justifying post-hoc modifications. The aim of the post-hoc modifications was to obtain a factor structure that fit the data, and retained as many items as possible while remaining consistent with Hansen and Larson's (2005) hypothesized factor structure. The modifications resulted in a new, psychometrically sound, 46-item model organized

into five positive factors (initiative, basic skills, interpersonal relationships, team work and social skills, adult networks and social capital), and four negative factors (stress, negative peer influences, social exclusion, inappropriate adult behavior).

Within the trimming process, the identity and negative group factors were removed. Removing negative group dynamics was less concerning, since there were only four items (I am often asked to do more than my fair share; I am frequently exposed to inappropriate sexual comments, jokes, or gestures; I am often discriminated against because of my gender, race, ethnicity, disability, or sexual orientation; I often hear negative things about sport), and these items resembled others found on the remaining factors (e.g., I am often exposed to unreasonable demands on my time by my coaches, I am frequently exposed to leaders who make inappropriate sexual comments or jokes, I am often ridiculed by peers). From a conceptual standpoint, the loss of negative group dynamics made sense to us. Mainly, we would argue that it is not a unique theme, but rather, a higher order process within the context of university sport that encompasses elements of negative peer influences, social exclusion, stress, and inappropriate adult behavior.

Conversely, the loss of the identity subscale was more concerning, because of the relevance of identity to emerging adulthood (Arnett, 2006). Arnett (2006) classifies emerging adulthood as "the age of identity explorations… it is the age of instability; it is the most self-focused age of life; it is the age of feeling in-between, neither adolescent nor adult; and it is the age of possibilities, when optimism is high and people have an unparalleled opportunity to transform their lives" (p. 6). The YES 2.0 items may have been too simple (e.g., I am more confident trying out new things) to fully capture notions of identity present in emerging adulthood. It is also possible that being both a student and an athlete influences identity

development in ways that are not effectively captured by YES 2.0 items. Future research should examine whether the addition of more nuanced items for identity, that are specific to the cohort in question (i.e., emerging adults navigating the dual roles of being a student-athlete) may more readily form a psychometrically sound identity subscale.

Despite the loss of the two scales, we were optimistic about the results. Compared to Macdonald et al. (2010) who explored the psychometric properties of the YES using traditional approaches (i.e., CFA followed by exploratory factor analysis), we were able to use ESEM to discover a factor structure that maintained more items and was more consistent with Hansen and Larson's hypothesized factor structure. At this time, the factor structure was a result of post-hoc modifications. Thus, a second independent sample was required to confirm the resultant structure before claims of sound factorial validity could be made (Hair et al., 2010). This has never been done before in any study using YES outcomes and thus, we respectfully submit that such analyses, which are now outlined in Study two, represented a significant methodological advancement with respect to the testing of measures from the YES inventory.

Study Two

Method

One year later, the same recruitment procedures were followed as Study one. A new sample of CIS university athletes completed the 99 item survey pool. For the purpose of this paper, we were only interested in testing the new 46 item 9 factor model. CFA and ESEM were conducted to test model fit using the same criteria and guidelines as Study one. See Appendix A for items and factors and Table 1 for CFA and ESEM results.

Participants. In total, 554 athletes completed the online survey. However, 56 athletes also participated in Study one. In order to have a completely independent sample of athletes, their data were removed. Repeat participants were identified using the unique participant number associated with their email addresses. The final sample included 498 competitive athletes (172 male, 326 female; M_{age} = 20, range = 17-25, *SD* = 1.84) registered as full time students from 39 universities across Canada. Athletes competed in 27 different university sports at similar rates as Study one. The total sample consisted of 200 first year, 120 second year, 90 third year, 61 fourth year, and 27 fifth year student athletes, comprising 304 starters, 119 non-starters, 37 practice team members, and 38 athletes who did not know their playing status.

Results

CFA

Summary statistics for the nine-factor 46 item model from Study one showed good fit: CFI = .911, SRMR = .056, RMSEA = .040 (90% *CI* = .037 – .043), and χ^2/df = 1.781. Each factor had a CR score above .7, except for negative peer interactions (.65). All factor loadings were significant and above .32 (range = .41 – .92). See Table 1 for the CFA factor structure and loadings, and table 2 for the CFA correlation matrix and scale descriptives. Correlations between subscales ranged from .02 to .64, with the exception of one correlation at .76 (between the initiative subscale and the teamwork and social skills subscale). All significant correlations between the positive subscales were positive, all significant correlations between the negative experience subscales were also positive (i.e., move in the same direction), and all significant correlations between the positive and negative subscales were in the inverse direction, as would be expected.

ESEM

We hypothesized that that responses to the 46 items would a) be explained by 9 correlated factors, and b) each item would have a primary factor loading of .32 or greater on intended factors and a loading of less than .32 on unintended factors. ESEM summary statistics showed excellent model fit: CFI = .956, SRMR = .023, RMSEA = .034 (90% *CI* = .029– .037), and χ^2/df = 1.559. All factor loadings were significant and were above .32 (range = .34 – .96), Further, no items cross-loaded above .32 on unintended factors. All CR scores were above .7, except for the factor that represented negative peer interactions, which had a CR score of .61. Table 1 summarizes the ESEM factor structure and loadings, and Table 2 illustrates the ESEM correlation matrix and scale descriptives. Correlations between subscales ranged from .02 to .57. Similar to the CFA results, all significant correlations were in the expected directions.

Study Two Discussion

In Study two, the psychometric properties of the resultant modified model from Study one was confirmed using both CFA and ESEM approaches with an independent sample of Canadian university athletes. Our results suggest that this confirmed model, which contains modified survey items and a new factor structure, is reliable and has strong factorial validity for assessing the developmental outcomes and experiences of university-aged student-athletes. We hereafter refer to our resultant model and its associated items as the University Sport Experience Survey (USES; see Appendix A).

USES Operational Definitions

One major limitation of YES based scales is that researchers have failed to operationally define the constructs measured by the subscales (Hansen & Larson, 2002, 2005; Macdonald et

al., 2010; Sullivan et al., 2015). We therefore offer the following definitions for each of the nine USES subscales. The *initiative* subscale of the USES assesses the extent to which student-athletes see their self-navigation abilities to have improved as a result of their involvement in university sport. It assesses perceived self-regulatory capabilities related to goal-setting, effort, planning, and discipline that can relate to their academic, athletic and personal lives. The *basic skills* subscale measures the degree to which athletes believe their involvement in university sport has helped improve their creativity and ability to find information. The *interpersonal relationships* subscale allows for the assessment of the extent to which participation in university sport has facilitated the acquisition of personal relationships with others who have different socioeconomic and ethnic backgrounds from their own. The *teamwork and social skills* subscale evaluates the extent athletes perceive that sport involvement has improved their ability to work with others in relation to group dynamics, sharing responsibility, giving and receiving feedback, and leading others. The *adult networks and social capital* subscale measures the degree to which athletes feel they have developed off-campus social networks as a result of their sport participation, including the support and belongingness athletes feel within their off-campus community. The *stress* subscale has questions related to athletes' perceptions of mental and emotional strain related to their university sport experience or their student-athlete roles, as well as their perceived inability to study or see their family. The *negative peer interactions* subscale evaluates athletes' perceptions regarding how their participation in university sport is related to immoral or risky behavior such as alcohol or drug consumption. *The social exclusion* subscale measures the extent to which athletes perceive that sport involvement has led to their exclusion

from others. Finally, the *inappropriate adult behavior* subscale evaluates players' perceptions of inappropriate or misplaced behaviors, interactions, or expectations from their sport leaders.

General Discussion

The current study is the only multi-year project to our knowledge to a) investigate YES affiliated factor structures with large a sample of athletes, and then b) confirm the newly established factor structure with a separate and independent large scale sample of athletes. Thus, the current study offers the first true full confirmation of the factorability of a YES derived scale. We contend that the USES borrows from the YES literature and narrows the focus of developmental outcomes in order to establish a reliable and valid survey that is specifically pertinent to the emerging adulthood sport cohort.

Moreover, one of the merits of the USES is that it takes a more direct approach in assessing developmental outcomes. Previous versions of the YES focus on perceptions of developmental experiences and do not assess the degree to which these experiences are perceived to have led to developmental outcomes. Therefore, researchers interpreting results from the other YES derived scales can only infer perceptions of personal development from athletes' exposure to experiences. This is problematic because development does not simply occur from being exposed to sport experiences alone (Petitpas et al., 2005). The USES addresses this issue for the positive development items by explicitly asking athletes about their perceptions of personal and socio-emotional outcomes, and the degree of change (i.e., better, more, improved, etc.) on the outcomes, as a result of their sport experiences. Notably, unlike the positive items on the USES, the negative items assess experiences and not skills or competencies. Thus, the degree of change was not assessed for the negatives items. Instead, we

assessed how often athletes had negative experiences by imbedding terms related to frequency within the items (i.e., often, and frequently).

The USES responds to recommendations for instruments to assess outcomes that result from domain-specific and developmentally-appropriate experiences, such that they are sensitive to the realities of the cohort under investigation (Gould & Carson, 2008). Hansen and Larson (2002, 2005) determined the factor structure of the YES using a sample of youth who participated in a variety of structured and organized activity domains (e.g., music, religion, sport). However, research has shown evidence for distinct patterns of learning experiences uniquely associated with different structured activities (Hansen, Larson, & Dworkin, 2003; Larson, Hansen, & Moneta, 2006). Thus, it is possible that by fitting their instrument to data acquired from numerous structured activities, Hansen and Larson (2002, 2005) limited its ability to validly capture experiences in the sport domain. This was evidenced by model fit issues for the YES 2.0 in this study, as well as the only other study to our knowledge to test its psychometric properties in a sport setting (MacDonald et al., 2012).

Compared to the YES-S, which was designed using a sample of younger athletes, our results suggest that the USES most likely focuses on factors that can be validly assessed in university sport cohorts. For instance, the USES factor for adult networks and social capital is more nuanced to the university sport setting and asks about influences from off campus connections, which may be more applicable to a sample of university athletes. As a result of their age and status, university athletes might attract more attention, and may be afforded more opportunities to connect with external communities than adolescent high school athletes. Although the YES-S includes outcomes for which the factorial validity is aligned with youth

athletes, our results suggest their structure may not apply as readily to an emerging adult university sport cohort.

Canadian Student-Athlete Profile

Although it was not the primary focus of this investigation, our data allows us to provide a description of the profile of student-athletes' responses on each of the USES scales. From an initial outlook, it appears the student-athletes report clear benefits resulting from their participation in Canadian university sport. On average, in both studies, athletes "agreed" that they improved their initiative, as well as teamwork and social skills. The athletes "somewhat agreed" that they developed interpersonal relationships and adult networks and social capital. On average, they were "uncertain" whether they developed basic skills and experienced stress because of their university sport involvement. The student-athletes generally "somewhat disagreed" that they experienced social exclusion, and "disagreed" that they experienced negative peer interactions. Finally, athletes "disagreed" in Study one, and "somewhat disagreed" in Study two, that they experienced inappropriate adult behavior. Although the average profile seems quite optimistic, there were individual athletes who had less than ideal experiences and who did not perceive personal and socio-emotional development to have resulted from their participation in university sport. Therefore, it would be wrong to conclude that participation in Canadian university sport programs will always result in positive outcomes.

USES Limitations and Future Directions

The USES offers a valuable tool for assessing university athletes' positive and negative development associated with university sport. However, it is possible that the current factor structure of USES is only valid for Canadian university athletes because of the importance the

CIS appears to place on students' personal development. Future researchers may want to test the USES in other collegiate systems (e.g., NCAA), where the make-up of competitive student-athletes may vary, where the emphasis on academics and athletics may be different, and where student-athlete roles may reflect different realities than in the Canadian system.

At this time, the USES should only be considered as an assessment tool for specific personal and socio-emotional outcomes related to initiative, basic skills, interpersonal relationships, teamwork and social skills, adult networks and social capital, stress, negative peer interactions, social exclusion, and inappropriate adult behavior. Due to the fact that our resultant outcome measures were constrained by the prior YES factor themes, the USES should not be seen as an exhaustive tool for evaluating all developmental outcomes that result from university sport participation. Specifically, our results show the 46 developmental survey items that we can borrow from extant work in developmental sport that can be advanced for assessment purposes in university-aged sport cohorts. Thus, we contend that future research looking to evaluate positive development in university sport, as it relates to the identified constructs in this study, can do so confidently using our CFA factor structure.

Our results also give us confidence in advancing these items, and particularly how they should be organized into factor structures (developmental outcomes and experiences) as part of future research seeking to improve a survey tool (USES) for use in university sport. Notably, our catalogue is not complete. Indeed, it is possible that some dimensions found on the YES (Hansen & Larson, 2002; Hansen & Larson, 2005) that were lost in the re-specification process may have been retained if worded differently, or if additional items were added. Alternatively, the poor fit that resulted in the two constructs being dropped may have been due, at least in part, to fitting the

data across different subgroups within the sample (e.g., starters and non-starters, under- and upperclassmen). Thus, one avenue for future research would be to conduct a multiple group (ESEM) analysis to examine whether the lost constructs can be successfully modeled for specific subgroups of university athletes. It is also possible that there are developmental outcomes associated with university sport participation that were not present in any of the items in the broad catalogue of YES-related items we administered to our sample of Canadian university athletes. Thus, an avenue for future research would be to examine what needs to be added to the USES as one evaluates the catalogue of outcomes that might be assessed beyond the foundational themes imported and retained from the YES. We recommend that researchers seeking to adapt the USES in the future, do so following the precedence set by this study. That is, using appropriate modeling techniques to test model fit (i.e., ESEM and/or CFA), and using appropriate post-hoc modifications techniques if they are required (i.e., ESEM).

Although the factorability of the USES was confirmed, and the internal consistency reliability of scales was strong, future research should establish predictive validity by determining the relationships between theoretically-grounded concepts and USES outcome measures. Specifically, studies might examine how specific aspects of coaching (e.g., leadership behaviors), relationships between coaches and athletes (e.g., closeness), or aspects of the program/team environment (e.g., cohesion) might each predict athletes' perceived development resulting from university sport. Finally, future researchers may wish to conduct invariance tests to examine whether the themes found within the USES are experienced equally across subgroups. For instance, one might test whether response patterns for first or second year student

athletes are equal to those of senior athletes. Alternately, measurement and structural patterns could be tested across gender, sport type, or player status.

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Appendix A

The University Sport Experience Survey (USES)

Instructions: The following questionnaire will assess the experiences afforded to you through your participation in university sport. Based on your current or recent involvement, please rate the level to which you agree or disagree with the following statements as they relate to your participation in your university sport program.

1	2	3	4	5	6	7
Strongly Disagree	Disagree	Somewhat Disagree	Uncertain	Somewhat Agree	Agree	Strongly Agree

As a result of my involvement in university sport:

1. I am better at setting goals for myself
2. I am better at finding new ways of achieving my goals
3. I am more capable of putting all my energy into an activity that is important to me
4. I am better at pushing myself
5. I more capable of focusing my attention
6. I am better at developing plans for solving a problem
7. I am better able to organize my time and not procrastinate
8. I am better at setting my priorities
9. I am better at practicing self-discipline
10. I believe that I have improved my skills for finding information
11. I feel that I have improved my computer skills and ability to use the internet
12. I believe I have improve my creative skills
13. I believe my artistic skills have improved
14. I have a better understanding of what I have in common with people from different backgrounds
15. I have become better acquainted with someone from a different ethnic groups
16. I have made more friends that come from different social classes (richer or poorer)
17. I discuss morals and values more often with others
18. I am more aware of the different obstacles other people face
19. I am more appreciative of other people's backgrounds
20. I am more aware of how my emotions and attitude affect others in group situations
21. I am better at giving feedback
22. I am better at taking feedback
23. I know more about the challenges of being a leader
24. I am more confident that I can rise to the challenge when others are counting on me
25. I am better at being in charge of a group of peers
26. I am better at supporting others
27. I am more capable of standing up for myself
28. I believe I have come to know more people in the off-campus community

29. I feel more supported by the off-campus community
30. I feel more a part of my off-campus community
31. I am frequently unable to study enough for tests
32. I am unable to do things with family more often
33. I am often stressed
34. I often feel over-worked
35. I often do things that are morally inappropriate
36. I often consume alcohol
37. I frequently take drugs
38. I often feel like I don't belong
39. I often feel left out
40. I am frequently exposed to social cliques
41. I am frequently exposed to leaders who are controlling and manipulative
42. I am frequently exposed to leaders who make inappropriate sexual comments or jokes
43. I am frequently exposed to leaders who put down my ideas
44. I am frequently exposed to leaders who blame me for things beyond my control
45. I am often exposed to leaders who play favorites
46. I am often exposed to leaders who talk down to me

Note. Initiative (items 1-9), Basic Skills (items 10-13), Interpersonal Relationships (items 14-19), Teamwork and Social Skills (items 20-27), Adult Networks and Social Capital (items 28-30), Stress (items 31-34), Negative Peer Interactions (items 35-37), Social Exclusion (items 38-40), Inappropriate Adult Behavior (41-46).

Table 1. Study Two ESEM and CFA Factor Structures for the 46 item 9 factor model.

	ESEM									
Items	F1	F2	F3	F4	F5	F6	F7	F8	F9	CFA
F1 (Initiative)										
I1	**.69**	-.03	.05	.03	.04	.01	-.04	-.02	-.06	**.77**
I2	**.64**	.13	.04	.09	.03	.00	-.02	.03	-.06	**.78**
I3	**.48**	.02	-.01	.19	.00	-.08	-.07	.04	.02	**.63**
I4	**.58**	-.14	.00	.20	.00	.04	-.03	-.06	-.07	**.71**
I5	**.54**	.11	-.06	.18	.01	-.11	-.03	.01	.06	**.67**
I6	**.45**	.20	-.01	.21	-.01	.03	-.03	-.07	.06	**.64**
I7	**.50**	.10	.00	-.09	.07	-.07	.05	-.04	.04	**.45**
I8	**.75**	.03	.00	-.05	-.02	.00	.04	-.01	.02	**.68**
I9	**.78**	-.07	.00	.00	-.03	.07	.05	-.03	-.01	**.71**
F2 (Basic Skills)										
BS1	.15	**.46**	.24	.01	-.04	.01	.04	-.09	.01	**.68**
BS2	-.02	**.59**	.09	.00	-.07	.08	.07	-.07	.03	**.61**
BS3	.09	**.63**	.11	.04	.08	-.08	.03	.04	-.02	**.75**
BS4	-.04	**.79**	.00	.01	.00	.00	-.10	.12	-.04	**.66**
F3 (Interpersonal Relationships)										
IR1	.02	.02	**.81**	-.08	.04	-.01	-.01	.00	.05	**.74**
IR2	-.05	.04	**.56**	.01	.01	.02	.14	-.12	-.06	**.56**
IR3	-.05	-.03	**.58**	.10	.11	-.02	-.03	.01	.03	**.62**
IR4	.00	.25	**.39**	.13	.04	-.01	.06	-.03	.02	**.62**
IR5	.10	.04	**.50**	.18	-.03	-.03	-.06	.03	.02	**.65**
IR6	.05	.18	**.65**	.01	-.01	.04	-.09	.01	-.05	**.78**
F4 (Teamwork and Social Skills)										
TSS1	.21	-.06	.18	**.41**	.00	.04	.00	.06	-.12	**.65**
TSS2	.04	.08	-.07	**.71**	-.03	.02	.01	-.02	.01	**.70**
TSS3	.27	-.06	.04	**.45**	.01	-.06	-.03	.08	-.10	**.65**
TSS4	.03	.02	.08	**.61**	.00	.06	.01	-.01	-.03	**.68**
TSS5	.23	.00	.03	**.51**	.07	-.02	.00	-.01	-.03	**.70**
TSS6	-.03	.08	-.02	**.74**	.07	.01	.04	-.07	.06	**.71**
TSS7	.08	-.01	.04	**.66**	.00	-.02	-.13	-.01	.05	**.71**
TSS8	.00	.07	.11	**.55**	-.01	-.04	.14	-.10	-.07	**.66**
F5 (Adult Networks and Social Capital)										
ANSC1	-.01	.06	.13	.12	**.52**	-.10	.08	-.01	-.05	**.69**
ANSC2	-.02	-.01	.02	.02	**.69**	.08	-.03	.03	-.01	**.71**
ANSC3	.04	-.02	-.02	-.05	**.96**	.03	.01	-.02	.04	**.92**
F6 (Stress)										
S1	-.08	-.01	.00	-.01	.08	**.64**	-.02	-.03	.11	**.70**
S2	.16	-.14	.06	-.05	-.06	**.34**	.15	.15	.03	**.42**
S3	.00	.00	.04	-.01	.05	**.76**	-.07	.12	-.03	**.45**
S4	.03	.07	-.12	.05	-.02	**.78**	.06	.00	.04	**.79**
F7 (Negative Peer Interactions)										
NPI1	-.05	-.01	-.04	.05	-.01	.03	**.63**	.10	.08	**.74**

NPI2	.00	-.04	.06	.04	.05	-.03	**.41**	-.05	.08	**.40**
NPI3	.00	.08	-.13	-.04	.07	.01	**.50**	.13	-.06	**.54**
F8 (Social Exclusion)										
SE1	-.03	-.02	-.02	-.06	-.07	.09	.11	**.71**	.02	**.86**
SE2	-.01	.10	-.04	-.02	.06	.00	.00	**.89**	.04	**.85**
SE3	-.02	-.13	.15	.16	-.03	.01	.03	**.43**	.18	**.48**
F9 (Inappropriate Adult Behavior)										
IAB1	.03	-.03	-.01	.02	.06	.00	.05	-.06	**.91**	**.86**
IAB2	.03	.01	.04	-.04	-.03	-.11	.24	.17	**.37**	**.47**
IAB3	.01	.06	.00	-.07	.00	-.01	.00	.04	**.81**	**.83**
IAB4	.00	.09	.00	-.03	.02	.07	.01	.06	**.74**	**.81**
IAB5	-.11	-.03	-.03	.16	-.04	.09	-.04	.15	**.60**	**.72**
IAB6	-.06	-.06	.02	-.01	-.03	.03	.00	.01	**.82**	**.87**

Note. The item order corresponds with the items found in Appendix A. For both ESEM and CFA solutions, all parameter estimates are standardized and a priori target loadings designed to measure each factor are in bold. In order to conserve space, we only present the CFA target loadings for each a priori factor since all non-target loadings are zero. I =initiative, BS = Basic Skills, IR = Interpersonal Relationships, TSS = Teamwork and Social Skills, ANSC = Adult Networks and Social Capital, S = Stress, NPI = Negative Peer Interactions, SE = Social Exclusion, IAB = Inappropriate Adult Behaviour.

Table 2. Study Two Scale Desrciptives and Correlation Matrices for CFA and ESEM.

Factors	F1	F2	F3	F4	F5	F6	F7	F8	F9
F1	-								
F2	.40**	-							
F3	.47**	.64**	-						
F4	.76**	.48**	.63**	-					
F5	.17**	.17**	.28**	.18**	-				
F6	-.18**	-.15*	-.08	-.09	.02	-			
F7	-.27**	.05	-.14*	-.17**	.08	.18**	-		
F8	-.37**	-.16**	-.24**	-.36**	-.15**	.40**	.42**	-	
F9	-.37**	-.10	-.12*	-.26**	.07	.52**	.43**	.56**	-
M	5.71	4.21	5.24	5.75	4.64	4.37	2.18	3.02	2.68
SD	1.17	1.76	1.42	1.13	1.68	1.80	1.64	1.85	1.80
Skewness	-1.11	-.28	-.85	-1.08	-.40	-.30	1.31	.55	.97
Kurtosis	1.39	-.88	.36	1.31	-.74	1.04	.55	-.97	-.25
CR (CFA)	.88	.77	.82	.87	.79	.77	.65	.72	.89
CR (ESEM)	.86	.75	.79	.85	.80	.75	.61	.78	.89

Note. Correlations above the main diagonal represent CFA results, while correlations below the main diagonal represent ESEM results. F1 = initiative, F2 = Basic Skills, F3 = Interpersonal Relationships, F4 = Teamwork and Social Skills, F5 = Adult Networks and Social Capital, F6 = Stress, F7 = Negative Peer Interactions, F8 = Social Exclusion, F9 = Inappropriate Adult Behaviour. *M* = Mean, *SD* = Standard Deviation, *CR* = Construct Reliability. * $p \leq .05$, ** $p \leq .01$.

Supplemental Material: Appendix B

99 Item Survey

Instructions: The following questionnaire will assess the experiences afforded to you through your participation in university sport. Based on your current or recent involvement, please rate the level to which you agree or disagree with the following statements as they relate to your participation in your university sport program.

1	2	3	4	5	6	7
Strongly Disagree	Disagree	Somewhat Disagree	Uncertain	Somewhat Agree	Agree	Strongly Agree

As a result of my involvement in university sport:

Identity

1. I am more confident trying out new things (Y1I3; Y2I1)
2. I feel that my life has taken a positive turn (Y1I9; Y2I6)
3. I am more comfortable trying new ways of acting around people (Y1I4; Y2I2)
4. I experience things that I do not get to experience anywhere else (Y1I5; Y2I3)
5. I think more about my future (Y1I6; Y2I4)
6. I think more about who I am (Y1I7; Y2I5)
7. I am more confident that I can make a difference in the world (Y1I8)
8. I have a better understanding of my ethnic or racial heritage (Y1I10)
9. I have a better understanding of what I am good at (Y1I1)
10. I know more about what I like and dislike (Y1I2)

Initiative

11. I am better at setting goals for myself (Y1I11; Y2I7; Y3I21; Y4I10)
12. I am better at finding new ways of achieving my goals (Y1I12; Y2I8; Y3I20; Y4I19)
13. I am better at considering possible obstacles when making plans (Y1I13; Y2I9; Y3I22; Y4I11)
14. I am more capable of putting all my energy into an activity that is important to me (Y1I15; Y2I10; Y3I26; Y4I15)
15. I am better at pushing myself (Y1I16; Y2I11; Y3I24; Y4I13)
16. I more capable of focusing my attention (Y1I18; Y2I12; Y3I25; Y4I14)
17. I am better at developing plans for solving a problem (Y1I20; Y2I14)
18. I am better at setting my priorities (Y1I23; Y2I17)
19. I am better at practicing self-discipline (Y1I25; Y2I18)
20. I am better at learning from others by observing how they solve their problems (Y1I20; Y2I13; Y3I23; Y4I12)
21. I am more capable of using my imagination to solve a problem (Y1I21; Y2I15)
22. I am better able to organize my time and not procrastinate (Y1I22; Y2I16)
23. I have a stronger belief that hard work pays off (Y1I17)
24. I am better at considering how other people fit into my plans (Y1I14)

25. I am more capable of getting my homework done in order to have time for my other activities (Y1I24)

Basic Skills

26. I am better at controlling my temper (Y1I26; Y2I19)
27. I am more capable of dealing with fear and anxiety (Y1I27; Y2I20)
28. I am better at handling stress (Y1I28; Y2I21)
29. I have a stronger understanding of how my emotions affect my performance (Y1I30; Y2I22)
30. I feel that I have improved my skills as an academic (Y1I32; Y2I23; Y3I16; Y4I6)
31. I believe that I have improved my skills for finding information (Y1I33; Y2I24; Y3I15; Y4I5)
32. I feel that I have improved my computer skills and ability to use the internet (Y1I35; Y2I25; Y3I17; Y4I7)
33. I believe I have improved my creative skills (Y1I36; Y2I26; Y3I18; Y4I8)
34. I believe my artistic skills have improved (Y1I36; Y2I26; Y4I8)
35. I feel that my communication skills have improved (Y2I27)
36. I believe my athletic skills have improved (Y1I34; Y2I28; Y3I27; Y4I6)
37. I feel my physical skills have improved (Y1I34; Y2I28; Y3I27; Y4I6)
38. I am more capable of relaxing (Y1I29)
39. I am better at expressing my emotions (Y1I31)

Interpersonal Relationships

40. I have made more friends from the opposite gender (Y1I49; Y2I29; Y3I10)
41. I have a better understanding of what I have in common with people from different backgrounds (Y1I50; Y2I30; Y3I12)
42. I have become better acquainted with someone from a different ethnic group (Y1I51; Y2I31)
43. I have made more friends that come from different social classes (richer or poorer) (Y1I52; Y2I32)
44. I am more confident about my ability to stand up for the things I believe are morally right (Y2I35)
45. I discuss morals and values more often with others (Y2I36)
46. I am more confident about my abilities to help others (Y1I53; Y2I33; Y3I8)
47. I am more confident about my ability to change my school or community for the better (Y1I54; Y2I34)
48. I am better able to make a difference in my community (Y1I55)
49. I am more appreciative of other people's backgrounds (Y1I57)
50. I am more aware of the different obstacles other people face (Y1I56)

Teamwork and Social Skills

51. I am better at compromising when working with others (Y1I37; Y2I37; Y3I4; Y4I2)
52. I am better at sharing responsibility (Y1I38; Y2I38; Y3I3; Y4I1)
53. I am more patient with others (Y1I39; Y2I39; Y3I5; Y4I3)
54. I am more aware of how my emotions and attitude affect others in group situations (Y1I40; Y2I40; Y3I14; Y4I4)
55. I am more aware of the fact that it is not necessary to like people in order to work with them (Y1I41; Y2I41; Y3I9)
56. I am better at giving feedback (Y1I42; Y2I42; Y3I1)

57. I am better at taking feedback (Y1I43; Y2I43; Y3I2)
58. I know more about the challenges of being a leader (Y1I44; Y2I44; Y3I7)
59. I am more confident that I can rise to the challenge when others are counting on me (Y1I45; Y2I45; Y3I6)
60. I am better at being in charge of a group of peers (Y1I47; Y2I46)
61. I am better at supporting others (Y1I46)
62. I am more capable of standing up for myself (Y1I48)

Adult Networks and Social Capital

63. I feel that I have improved my relationship with my parents/guardians (Y1I58; Y2I47)
64. I feel that I have better conversations with my parents/guardians (Y1I59; Y2I48; Y3I13)
65. I believe I have come to know more people in the off-campus community (Y1I60; Y2I49; Y3I11)
66. I feel more supported by the off-campus community (Y1I61; Y2I50)
67. I feel more a part of the off-campus community (Y1I62)
68. I believe I have come to know more people in the on-campus community (Y1I60; Y2I49; Y3I11)
69. I feel more supported by the on-campus community (Y1I61; Y2I50)
70. I feel more a part of the on-campus community (Y1I62)
71. More job or career opportunities have opened up for me (Y1I63; Y2I51)
72. I feel more prepared for life after graduation (Y1I64; Y2I52)
73. I have a greater desire to stay in school (Y1I65; Y2I53; Y3I19)

Stress

74. I am often stressed (Y1I68; Y2I56; Y3I37)
75. I am frequently unable to do things with family (Y1I66; Y2I55)
76. I am unable to complete my assignments more often (Y1I66; Y2I54)
77. I am frequently unable to study enough for tests (Y1I66; Y2I54)
78. I often feel over-worked (Y1I69)

Negative Peer Influences

79. I often feel pressured to do things I don't want to do (Y1I71; Y2I57)
80. I often do things that are morally inappropriate (Y1I70; Y2I58)
81. I am often ridiculed by peers (Y1I72; Y2I59)
82. I often consume alcohol (Y1I73; Y2I60; Y3I34; Y4I21)
83. I frequently take drugs (Y1I73; Y2I60; Y3I34; Y4I21)

Social Exclusion

84. I often feel like I don't belong (Y1I74; Y2I61)
85. I often feel left out (Y1I75; Y2I62)
86. I am frequently exposed to social cliques (Y1I76; Y2I63; Y3I36)

Negative Group Dynamics

87. I am often asked to do more than my fair share (Y1I77; Y2I64; Y3I35)
88. I am frequently exposed to inappropriate sexual comments, jokes, or gestures (Y1I79; Y2I65; Y3I33)
89. I am often discriminated against because of my gender, race, ethnicity, disability, or sexual orientation (Y1I80; Y2I66; Y3I28; Y4I22)

90. I often hear negative things about sport (Y1I79)

Inappropriate Adult Behavior

91. I am frequently exposed to leaders who "hit" on me (make sexual advances) (Y1I85; Y2I68)
92. I am frequently exposed to leaders who make inappropriate sexual comments or jokes (Y1I86; Y2I69; Y3I31; Y4I19)
93. I am frequently exposed to leaders who encourage me to do things I believe are morally wrong (Y1I88; Y2I70; Y3I32; Y4I20)
94. I am frequently exposed to leaders who are controlling and manipulative (Y1I82; Y2I67; Y3I29; Y4I17)
95. I am frequently exposed to leaders who put down my ideas (Y1I81)
96. I am frequently exposed to leaders who blame me for things beyond my control (Y1I83)
97. I am often exposed to unreasonable demands on my time by my coaches (Y1I84)
98. I am often exposed to leaders who play favorites (Y1I87)
99. I am often exposed to leaders who talk down to me (Y1I89; Y3I30; Y4I18)

Note. This Appendix presents the entire list of 99 items that athletes responded to. All items are organized within a prior hypothesized dimensions/factors of the YES 2.0. The YES 1.0 (Hansen & Larson, 2002), the YES 2.0 Hansen & Larson, 2005), the YES-S (MacDonald et al., 2012), and the Short Form YES-S (Sullivan et al., 2015) are represented by Y1, Y2, Y3, and Y4 respectively in the superscript. I = the item number on the corresponding scale in the superscript. Thus, Y1I1 would refer to the first item found on the YES1.0.

Supplemental Material

Table 3. Study One Factor Structure for ESEM on the 46 item 9 factor model.

	ESEM								
Items	F1	F2	F3	F4	F5	F6	F7	F8	F9
F1 (Initiative)									
I1	**.65**	-.04	.10	.05	-.01	-.04	.01	-.01	.02
I2	**.58**	-.00	.18	.07	-.01	-.03	.09	-.03	-.02
I3	**.52**	.01	.07	.09	.03	-.02	.05	.04	-.04
I4	**.61**	-.15	-.01	.12	.01	.04	.02	-.02	-.07
I5	**.52**	.11	-.03	.11	.07	-.05	-.07	.01	-.03
I6	**.52**	.23	.06	.03	.04	.05	-.03	-.05	.06
I7	**.71**	.11	-.17	-.14	.06	.04	.00	-.03	.01
I8	**.80**	.03	.02	-.13	-.03	.00	-.03	-.02	.02
I9	**.62**	.02	-.07	.07	.03	.05	-.12	.02	.02
F2 (Basic Skills)									
BS1	.14	**.45**	.14	.06	.11	.07	.02	-.04	.00
BS2	-.04	**.61**	.09	.03	.11	.01	-.03	.02	.01
BS3	.10	**.65**	.11	.04	-.03	-.01	.09	-.01	-.02
BS4	.03	**.80**	-.01	-.04	-.03	-.07	.02	.12	-.06
F3 (Interpersonal Relationships)									
IR1	-.02	.08	**.69**	-.02	.06	-.02	.02	.01	.01
IR2	.04	-.01	**.58**	-.03	-.02	.01	.22	-.07	-.03
IR3	.03	.02	**.44**	.09	.05	.05	.21	-.11	-.05
IR4	.01	.27	**.42**	.10	-.01	.08	-.08	-.03	.08
IR5	.10	.11	**.45**	.14	.04	.01	-.06	.09	-.04
IR6	-.05	.17	**.63**	.02	.05	-.02	-.05	.00	.02
F4 (Teamwork and Social Skills)									
TSS1	.12	.07	.09	**.57**	-.06	.00	-.08	.03	.00
TSS2	-.06	.02	-.02	**.73**	.11	.01	-.08	.00	.10
TSS3	.23	-.09	.16	**.47**	-.01	-.08	-.05	.14	-.10
TSS4	.02	-.04	.03	**.72**	.05	.01	.07	.00	-.04
TSS5	.17	-.05	.06	**.53**	-.01	-.02	.03	-.03	-.07
TSS6	-.04	.07	-.10	**.77**	.03	.07	.07	-.08	.00
TSS7	.09	.01	.12	**.57**	.03	-.07	-.09	.04	.02
TSS8	.09	.12	.02	**.60**	-.07	.00	.11	-.10	.04
F5 (Adult Networks and Social Capital)									
ANSC1	.05	-.01	.03	-.03	**.76**	-.10	.01	.01	.01
ANSC2	.06	.05	.03	.00	**.70**	.03	.01	-.03	-.02
ANSC3	-.01	-.02	.00	.04	**.89**	.00	.01	.00	-.01
F6 (Stress)									
S1	-.23	.06	.00	.05	.00	**.67**	.02	-.01	-.02
S2	.10	-.06	.11	-.06	-.09	**.47**	.02	.05	.08
S3	.00	.02	-.04	-.03	.01	**.70**	0.05	.10	.00
S4	.02	-.01	.01	-.04	.00	**.77**	-.01	.02	-.01

F7 (Negative Peer Interactions)									
NPI1	-.01	.06	-.02	-.02	-.01	.00	**0.71**	.18	.06
NPI2	-.03	-.04	-.01	.04	.05	.19	**0.58**	-.05	.00
NPI3	-.06	.19	-.05	.00	.00	-.03	**0.54**	.11	.03
F8 (Social Exclusion)									
SE1	-.06	.03	.00	-.04	.00	.06	0.04	**.79**	.02
SE2	-.01	.00	-.04	.03	-.01	.07	0.00	**.87**	.03
SE3	.02	-.11	.05	.02	-.03	.30	0.18	**.22**	.13
F9 (Inappropriate Adult Behavior)									
IAB1	-.08	.00	.03	.01	.01	-.02	-0.02	-.01	**.79**
IAB2	.03	-.06	.08	-.10	.02	-.01	0.24	.15	**.39**
IAB3	-.02	.03	.02	-.01	.02	.03	0.04	.03	**.80**
IAB4	-.02	.09	-.04	-.01	-.01	.00	-0.01	-.01	**.81**
IAB5	.02	-.12	-.08	.07	-.04	.16	0.03	.01	**.59**
IAB6	.06	-.03	-.01	-.01	-.03	-.02	0.00	.02	**.87**

Note. The item order corresponds with the items found in Appendix A. All parameter estimates are standardized and a priori target loadings designed to measure each factor are in bold. I =initiative, BS = Basic Skills, IR = Interpersonal Relationships, TSS = Teamwork and Social Skills, ANSC = Adult Networks and Social Capital, S = Stress, NPI = Negative Peer Interactions, SE = Social Exclusion, IAB = Inappropriate Adult Behaviour.

Supplemental Material

Table 4. Study One Scale Descriptives and Correlation Matrix for 46 item 9 Factor ESEM model.

Factors	F1	F2	F3	F4	F5	F6	F7	F8	F9
F1	-	-	-	-	-	-	-	-	-
F2	.24**	-	-	-	-	-	-	-	-
F3	.47**	.42**	-	-	-	-	-	-	-
F4	.58**	.29**	.53**	-	-	-	-	-	-
F5	.34**	.30**	.35**	.28**	-	-	-	-	-
F6	.04	-.00	-.03	-.01	-.08	-	-	-	-
F7	-.16**	.02	-.08	-.07	.08	.19**	-	-	-
F8	-.23**	.01	-.11*	-.19*	-.15**	.34**	.10	-	-
F9	-.18**	-.01	-.11*	-.18**	-.14**	.35**	.27**	.44**	-
M	5.56	3.93	5.13	5.70	4.77	4.20	2.07	2.91	2.18
SD	1.25	1.64	1.40	1.12	1.53	1.85	1.53	1.76	1.58
Skewness	-1.06	-.08	-.79	-1.05	-.39	-.28	1.42	.60	1.58
Kurtosis	1.23	-.84	.26	1.40	-.49	1.09	.94	-.86	1.05
CR (ESEM)	.87	.77	.76	.86	.79	.77	.67	.76	.88

Note. F1 =initiative, F2 = Basic Skills, F3 = Interpersonal Relationships, F4 = Teamwork and Social Skills, F5 = Adult Networks and Social Capital, F6 = Stress, F7 = Negative Peer Interactions, F8 = Social Exclusion, F9 = Inappropriate Adult Behavior. *M* = Mean, *SD* = Standard Deviation, *CR* = Construct Reliability. * $p \leq .05$, ** $p \leq .01$.

Chapter Three

Article Two

Rathwell, S., & Young, B. W. (under review). Athletes' perceptions of positive development resulting from Canadian intercollegiate sport: A qualitative analysis.

Abstract

Governing bodies of university sport have adopted more holistic approaches to the development of their athletes (CIS, 2013; NCAA, 2015). To our knowledge, there have been little empirical efforts made to describe and assess positive development in the Canadian Interuniversity Sport (CIS) context. In this study, we qualitatively examined positive developmental outcomes associated with athletes' participation in CIS sport programs. Semi-structured open-ended interviews were conducted with 15 student-athletes (5 male, 10 female; M_{age} = 22, range = 17-26). Guided by positive development categories found within the Youth Experience Survey (YES 2.0; Hansen & Larson, 2005), a deductive content analysis was performed (Hsieh & Shannon, 2005). Athletes discussed positive developmental outcomes consistent with all YES categories. Our results suggest university sport programs offer rich opportunities for developing skills, qualities, experiences, and relationships needed to become functioning members in our society.

Keywords: Positive Development; Emerging Adulthood; Qualitative Research; University Sport; Coaching

Governing bodies of university sport in North America have recently announced a more holistic approach to athlete development, and have focused more attention on their athletes' academic success and personal and socio-emotional growth (CIS,2013; "NCAA," 2015). For instance, the stated aim of Canadian Interuniversity Sport (CIS) is to "inspire Canada's next generation of leaders through excellence in sport and academics" (CIS, 2013, p.10). Moreover, the National College Athletic Association (NCAA) has announced a partnership with the National Association of Academic Advisors for Athletics (N4A) to begin formally integrating academic and life skill programs, as well as practitioners trained to implement such programs within the NCAA (NCAA, 2015). Although university sport programs have altered their mission statements and have begun to implement programs that target positive development, the positive development of university athletes remains an understudied area of research. To our knowledge, there have been no empirical efforts to describe and assess positive development in the CIS context.

The positive youth development framework (PYD) served as a conceptual guide for this study (Lerner, Almerigi, Theokas, & Lerner, 2005). The PYD framework is relevant because it is a strength based framework that stresses the importance of interactions between individuals and their environments. We were interested in the positive development of university athletes within the context of CIS sport. According to the United Nations Educational, Scientific, and Cultural Organization (UNESCO), youth are defined as "persons between the ages of 15 and 24 years" (UNESCO, n.d.). Although UNESCO offer an age range, they describe that "youth is best understood as a period of transition from the dependence of childhood to adulthood's independence and awareness of our interdependence as members of a community (UNESCO, n.d.)." In line with the UNESCO definition of youth, university athletes are situated in the final

transition period between childhood and adulthood. In the past two decades, Arnett (2000, 2006) coined this period as emerging adulthood. According to Arnett (2000), emerging adults (aged 18-25) have more independence than younger cohorts of youth (i.e., children and adolescents), but have yet to achieve standard markers of adulthood such as marriage and parenthood (Arnett, 2000). Although emerging adults represent the oldest cohort of youth, we propose the PYD framework is useful for examining development in university sport.

The PYD framework has been used extensively for evaluating the positive developmental outcomes of sport programs in the past (Gould & Carson, 2008; Holt, 2007). However, nearly all PYD research in sport has examined children and adolescent populations and has focused on recreational (e.g., Falcão, Bloom, & Gilbert, 2012; Weiss, Stuntz, Bhalla, Bolter, & Price, 2013), high school (Hayden et al., 2015; Kendellen & Camiré, 2015), and elite youth sport (e.g., Strachan, Côté, & Deakin, 2011; Wilkes & Côté, 2010). Although a wealth of studies on younger sporting cohorts exists, there remains a lack of empirical information on a) which personal and socio-emotional competencies are developed within emerging adult sport settings (e.g., university sport), and b) which of these competencies influence emerging adults' success in various other realms of life.

One important marker of positive development in many programs is the acquisition of life skills (Gould & Carson, 2008; Petitpas, Cornelius, Van Raalte, & Jones, 2005). Life skills are ''skills that enable individuals to succeed in the different environments in which they live, such as school, home and in their neighborhoods. Life skills can be behavioral (communicating effectively with peers and adults) or cognitive (making effective decisions); interpersonal (being assertive) or intrapersonal (setting goals)'' (Danish, Forneris, Hodge, & Heke, 2004, p. 40).

A popular measure of life skills is the Youth Experience Scale (YES 2.0; Hansen & Larson, 2005). Gould and Carson (2008) recommended using the YES 2.0 (Hansen & Larson, 2005) to study life skill development in sport settings because it provides an excellent example of the types of developmental facets that need to be considered. The YES 2.0 outlines six positive development categories (i.e., identity, initiative, basic skills, interpersonal relations, teamwork and social skills, adult networks and social capital) and five negative categories (i.e., stress, negative peer influences, social exclusion, negative group dynamics, inapropriate adult behaviour). Recently, Authors (2016) provided quantitative evidence for the use of YES derived themes for assessing life skill development within two national samples of university sport athletes. For instance, the average university athlete believed they learned self-regulatory capabilities related to goal setting, effort, planning, and discipline, improved their creativity and ability to find new information, and developed teamwork and social skills through their involvement in university sport. Although their work provides a snapshot of the average university athlete's experience, there remains a need for qualitative work in this areas to contextualize how YES based developmental experiences are understood by university ahletes.

The aim of the current study was to qualitatively examine university athletes' positive development and the life skills they developed through their participation in CIS sport programs. Specifically, we aimed to document and describe the experiences of student-athletes and their perceptions of positive development related to their intercollegiate sport involvement using themes borrowed from the YES.

Method

Participants

Ethical approval from the host university was granted before participants were recruited. Prior to this study, 605 university athletes completed an online survey in which they reported

quantitative data for their perceived developmental experiences using a modified version of Hansen and Larson's YES 2.0 (Authors, 2016). To be eligible for this study, athletes' data were screened to ensure they a) were a member of a CIS sanctioned team and b) perceived high instances of positive development experiences attributable to varsity sport. With respect to the latter criterion, athletes needed to have an average score of five or above (out of seven) on the six positive categories of the YES 2.0. The reason for this criterion was that it was important to first have self-reported evidence that athletes experienced positive development before exploring how such development is fostered within university sport settings.

Following screening, 34 athletes met the criteria and were invited to participate in this study. Fifteen agreed to participate (5 male, 10 female; M_{age} = 22, range = 17-26, *SD* = 2.71), hailing from 12 universities, located across six different provinces (i.e., Ontario, Quebec, New Brunswick, Saskatchewan, Alberta, and British Columbia) in Canada. All athletes were registered in full time studies and represented different sports: cross country (n = 3), soccer (n = 3), ice hockey (n = 2), rugby (n = 2), volleyball (n = 2), curling (n = 1), football (n = 1), and track and field (n = 1). The sample consisted of three first-year, two second-year, four third-year, one fourth-year, and five fifth-year eligible student-athletes.

Data Gathering

Interview guide. Data were collected by the primary researcher using semi-structured open-ended interviews that lasted on average 57 minutes (range = 40-77 minutes). Seven in-person and eight Skype interviews were conducted. The interview guide was piloted with two CIS athletes. The pilot interviews were recorded and reviewed to ensure the interview questions a) were understood by athletes, b) allowed athletes to elaborate on YES 2.0 categories in detail, and c) allowed athletes to differentiate amongst YES 2.0 categories. To help discriminate among the categories, we refined questions to be more open ended and used colloquial language. The

final interview guide consisted of four sections. The first section contained opening questions to introduce the topic and to initiate discussion (e.g., What does it mean to you to be a varsity athlete?). The second section addressed personal and socio-emotional development experiences and life skills, which were informed by the six positive categories of the YES 2.0 (Hansen & Larson, 2005). These questions were framed in colloquial terms. For example, to capture identity, we asked: Have you had experiences that have allowed you to get to know or to think about who you are? The third section had questions related to transfer. Whenever participants described experiences, qualities, skills, or relationships acquired in university sport, they were specifically questioned as to how each outcome influenced their lives outside of sport. Since our focus was on the positive developmental outcomes, we did not ask about each of the individual negative categories. Instead, we asked about any negative experiences with a broad open-ended question (i.e., Did you have any negative experiences related to being a varsity athlete?). The fourth section contained concluding questions which gave athletes the opportunity to include additional information they believed relevant or missing from the interview guide.

Data Analysis

In this study, a directed content analysis was used to identify, analyze, report, and discuss the data (Hsieh & Shannon, 2005) as it related to the categories of the YES 2.0 (Hansen & Larson, 2005). The goal of directed content analysis is to validate or conceptually extend existing frameworks (Hsieh & Shannon, 2005). The first step of the directed content analysis involved transcribing each interview verbatim. During this process, the researcher became immersed in the data and familiarized with the depth and breadth of its content. The interview was then analyzed line by line and broken down into codes comprising words, sentences, or entire paragraphs that conveyed the same idea and related to the same topic. A total of 1095 codes were identified. Each code received a tag that was relevant to its content and was collated into one of

the seven YES 2.0 categories. The final step involved creating subcategories within each category. Specifically, 39 subcategories were formed by grouping together codes that were similar in content and meaning (Hsieh & Shannon, 2005). Table 1 displays a summary of the categories and subcategories.

Validity

Establishing validity involves an attempt to enhance the accuracy of qualitative findings (Yardley, 2008). In this study, we compared independent researchers' coding and used participant feedback as external checks to the research process (Yardley, 2008).

Comparing researchers' coding. The primary author coded the 15 athlete interviews into 1095 individual codes and placed each code within one of the seven identified YES 2.0 categories. Next, the second author was provided with a list of eight identified YES 2.0 categories along with the operational definition for each category. Using this list, the second author was instructed to read all the transcripts and place 250 (about 23%) randomly-selected codes into one of the eight YES 2.0 categories. A comparison analysis was performed to determine inter-rater reliability between the two coders – a Cohen's kappa (Cohen's κ) of .81 indicated strong inter-rater reliability (Hruschka et al., 2004). Therefore, the two researchers were interpreting the codes into the higher order themes borrowed from the YES 2.0 similarly.

Participant feedback. To improve the credibility of the data, participants were allowed to verbally add, modify, clarify, or exclude any comments or ideas at the end of their interview (Yardley, 2008). Further, each participant was sent a full verbatim transcript of the interview and was invited to add, modify, clarify, or exclude any comments or ideas. All participants were satisfied with the interviews and transcripts and no concerns were raised.

Results and Discussion

The purpose of this study was to examine the experiences and life skills that student athletes developed through their participation in CIS sport programs. In this section, athletes' quotes are discussed within YES 2.0 categories and information in parentheses provides the title of each subcategory. Due to space constraints, we focus our discussion predominantly on subcategories mentioned by at least ten athletes (see Table 1). Participants were assigned pseudonyms to credit their comments while protecting their identities.

Identity

Athletes' identities were influenced by their athletics, academics, and experiences outside of university. Through their experiences within their different roles, athletes said they learned who they were and what they believed in (lessons about one's self). For example, John said:

> Through football and being in the sport complex all the time, I realized I wanted to work with people. I wasn't sure in what capacity at first, but I narrowed it down over time. By the end of my third year, I was the assistant coordinator at the football day camp and that is when I realized I wanted to work with kids. So it [being around football] helped me realize what I wanted, what my career goals were, and what my aspirations were.

Athletes also felt it was important to have a well-rounded sense of self and to not focus too heavily on one area of life (well-rounded identity). Carl said:

> My varsity experience taught me that you need to be a well-rounded person. You need to be flexible and to have a general passion for everything you do. So, I learned to care about what I'm doing as an athlete and about what I do outside of athletics. By that I mean, what I do in school and other things as well. You can't just conform to sport.

Many participants believed their varsity identity brought with it a sense of responsibility. They described how varsity athletes were identifiable members of their university, and thus, were aware their personal behaviors could influence public perception of their teams and

universities. Accordingly, many athletes monitored their behaviors and acted in ways that were congruent with the values of their teams and universities (social awareness). Veronica noted:

> Our coach always emphasized how we had to behave when we had our uniform on. Just little things like not drinking when in team gear, being respectful while you are out [socially], or being respectful to other teams. You are part of something bigger and the reputation of your whole school can be affected by how you act.

Although many athletes were cognizant of their affiliation to their school and spoke to how it influenced their lives outside of sport, Veronica was the only athlete who discussed internalizing social values of other organizations that she was a part of outside of sport. She purposefully behaved in a manner that was consistent with her employer's brand:

> I learned a lot about respecting others when I am affiliated with something. And this is something I carry forward to the rest of my life. I am affiliated with my work brand now, and when I wear my work polo, it is the same as when I wore my team jacket. When I have that polo on, I am not just a physiotherapist, I am representing our whole company. So I need to be respectful and reliable. Those are lessons I have taken from sport.

According to Arnett (2006), identity formation is important for university-aged athletes as they are positioned within the developmental period known as emerging adulthood. Spanning 18 to 25 years of age, it is characterized as "the age of identity explorations" (p. 6). Consistent with Arnett's theorizing, the current athletes were afforded ample opportunities to discover new interests; they highlighted how enacting multiple roles as a student, an athlete, a teammate, an employee, and a friend allowed them to learn who they were as a person.

Our CIS athletes were aware their actions could affect their university's reputation. Eisenberg, Cumberland, Guthrie, Murphy, and Shepard (2005) found that, as adolescents enter

into adulthood, they are more likely to behave in prosocial ways to gain approval from others. Likewise, athletes in this study monitored their behaviors and acted in accordance with the values of their universities in order to maintain a positive public image. Thus, the athletes were not just concerned with preserving their own images, but also the images of their teams and universities. The current results suggest university athletes' reasoning for engaging in prosocial behaviors is multifaceted, and that having an influence on the public perceptions of others, in addition to oneself, might heighten athletes' awareness and likelihood of behaving pro-socially.

Although most athletes internalized the social values of their universities, only one athlete did so with an outside organization. The other athletes may not have been exposed to alternative organizations. However, because Veronica was older (26 yrs.), she may have developed more sophisticated reasoning related to prosocial behaviors. Regardless of why behaviors were altered, these results suggest experiences in varsity athletics taught athletes important qualities related to social awareness and responsibility, which are both indicators of positive development in emerging adulthood (Eisenberg et al., 2005; Hawkins, Letcher, Sanson, Smart, & Toumbourou, 2009). Altogether, our CIS athletes understood identity as the evolution of a global varsity athlete identity that was a) consistent with the pro-social values of their universities, and b) was shaped through social experiences within different contexts where athletes experimented with their varsity athlete identity.

Initiative

As a result of the dedication required to succeed in varsity athletics, participants described learning to invest concerted effort towards the things that were important to them. Since athletes valued both their academics and athletics, they needed to learn how to manage their time effectively through purposeful scheduling and planning in order to thrive in both environments (time management). Aaron discussed balancing sport and school:

> It's all about organization and getting set up with a white board or a calendar. Just writing to-do lists, when things are due [in school], and when I need to work on projects. If it's a big project, I break it down into stages and write down what needs to be done by when. Then, I will be like 'ok, I know I have soccer on those days, so I can't work on it then'.

Aaron further elaborated on how he used the same strategies to stay on task at work:

> I use the same skills at work. The first thing I do is make a list of what I need to do because I will forget it otherwise. The next thing I do is add little notes and other things like that to my list. So that is something that definitely carries to different contexts.

Although all athletes used time management skills during the sport season, some said they weren't busy enough to use them in the summer. As Kelsey put it "I use the time management strategies I learned during school months, but I don't really need to in the summer".

Most athletes described using goal setting strategies within the context of sport (goal setting). Caroline described setting specific goals in practice:

> I like to set stages of goals for myself. So, not just longer-term goals. I focus on small things so I can be more aware of one aspect. Like 'this practice I am going to shoot with my left foot'. That way I find it easier to focus for that hour or two on the field. Afterwards, I can be like 'I did this' or 'I didn't do this, so I need to work on it again'.

Athletes were divided when it came to setting goals outside of sport. On one hand, some athletes used goal setting techniques at school and work. For instance, Chelsea commented:

> We always set goals for our sport season and I think I kind of fed off of that a little bit. So I would use those strategies for my school work as well. Like, I would set little daily goals for what school work I wanted to get done before practice, or what I wanted to accomplish from an academic standpoint while I am away at a meet.

Conversely, others set superficial goals outside of sport or, like Kelly, noted “I don't really set goals outside of sport”.

Larson (2000) maintained that initiative is a pre-requisite for adult membership in Western societies. Initiative is not guaranteed to develop unless activities are structured, and individuals a) participate for personal motives, b) devote thought and effort toward mastering environmental demands, and c) direct their effort towards goals over time as they face setbacks, re-evaluations, and adjustments of strategies. University sport is an activity where athletes a) choose to participate, b) devote thought and effort toward improving, and c) work toward personal and team goals while adjusting to successes and failures. These circumstances engendered a need for the athletes to effectively set goals and manage their time during the sport season. Conversely, activities outside of sport may not have satisfied Larson’s criteria or lacked structure, which may explain why some athletes did not manage their time or set goals in non-sport contexts. In sum, CIS athletes defined initiative outcomes as their self-directed efforts towards overcoming academic, athletic, and life demands; which required them to develop and use skills related to planning, scheduling, and goal setting.

Emotions and Cognitive Skills

From a conceptual lens, Hansen & Larson (2005) grouped emotions, cognitive skills, and physical skills under the umbrella term of basic skills. In this study, we felt it was unnecessary to probe about physical skills since their development is inherent to university sport. In addition, compared to youth participant in Hanson and Larson's study, our CIS athletes’ emotional and cognitive experiences were complex and nuanced to the university sport experience. Thus, we felt the label of “Basic skills” was not a fair representation of our data and renamed this category as “emotions and cognitive skills”, which are both original components of Hansen and Larson’s basic skills.

Athletes expressed how successes and failures in sport triggered emotional experiences that were more varied and intense than in other areas of life. Being exposed to intense emotions regularly helped the athletes become more efficient at regulating their emotions in sport (emotional regulation). Karen described how sport afforded a platform for ample opportunities to practice controlling her emotions:

> Our coaches used to rate us [on emotional regulation] after every game on a five point scale. I was consistently a three or above. Last year, I had a consistent year because I was good at getting into an emotional state where I could perform. I really worked at that. I found out what that state was and then I really worked at being able to get there.

Athletes elaborated on how their emotional regulatory skills derived from sport helped improve their performance in work and school. For instance, Karen noted that she used the skills learned in sport to stay calm when things went awry when teaching youth groups at sport camp:

> The other day I had my worst work sessions ever. I had an awful group and I let my emotions get the best of me. The next day I was a bit scared, but I changed my mindset. I was like ‘this session will go better’, and it did. So I do use the same strategies at work, because it’s just me and 15 crazy little girls and I have to be emotionally ready for that. I have to be in the right mind set to perform in that environment as well.

Only one athlete said she was able to regulate her emotions in sport, but had issues doing so in other environments. Kelly seemed at a loss when thinking about how she could regulate her emotions when things went wrong at school:

> I don’t really have to regulate my emotions outside of sport. I am pretty easy going and I don't get rattled that often. Except in school when I am not doing well. Then that sucks but, what are you going to do?

The athletes believed that participation in university sport afforded them unique opportunities to experience and practice regulating emotions in a safe and controlled environment. These results reveal experiences that may partly explain how, following college graduation, former athletes had higher levels of emotional intelligence as well as career success after college graduation than their peers who did not participate in college sport (Sauer, Desmond, & Heintzelman, 2013). Our results align with prior work where athletes retrospectively testified how their work lives benefited from emotion regulation skills learned in high school sport (Kendellen & Camiré, 2015). However, athletes in Kendellen and Camiré's study rarely discussed transferring their skills to school. In our study, athletes identified school as a primary venue where they benefitted from self-regulatory skills learned in sport, which may reflect the fact that university is more academically challenging than high school and that university student-athletes are more prescient of the need to frequently apply such emotional regulation skills. Overall, emotions were understood by CIS athletes as experiences where they were exposed to varied and intense emotions, which they were required to regulate in order to perform in academia, athletics, and in life.

No subcategories for cognitive skills were discussed by at least ten athletes. Instead, athletes commented on a variety of cognitive outcomes. Some athletes described how sport taught them to treat disappointments, mistakes, and failures as opportunities to improve themselves (learning from setbacks and failures). Others felt sport required intense thought when planning, running, and analyzing plays, scrutinizing personal and team performance, and learning new techniques and positional systems (mentally stimulating aspects of sport). Some athletes described learning to mentally rehearse scenarios in sport and life (mental skills). Finally, a couple of athletes explained how varsity sport taught them to manage their efforts

effectively and to not over-exert themselves (importance of rest and recovery). Thus, cognitive skills were understood by CIS athletes in three ways: a) as experiences that were intellectually challenging, b) as important lessons learned from personal experiences, and c) as mental skills developed that helped performance in sport, school, and life.

Adult Network and Social Capital

All athletes noted making important connections with successful adults through their involvement in varsity sport (networking). They elaborated on different professional offers and potential future opportunities, as well as actual internships, co-ops, summer and/or part time jobs, or experiences that they would not have if they were not varsity athletes. Julie described how connections made in sport opened doors for her:

> I have had the opportunity to coach and to work with people from the provincial volleyball association. I was also able to get my coaching certification which is a great thing to have. I probably wouldn't have done that if I didn't meet people along the way who motivated me to start coaching and to get involved in the community.

Although all athletes made connections through sport that positively influenced their lives, only two athletes explicitly expressed learning the importance of networking skills and purposefully using them to make connections outside of sport. For instance, during her undergraduate degree in education, Julie was assigned a high school course to teach. Julie made it a point to network with the older teachers so that she could learn from their experiences:

> I taught last year and most teachers were in their 40's and 50's. I didn't let that stop me from building relationships. Now some of them are professional mentors for me. They have taught me so much about teaching techniques and strategies. We still correspond regularly, even though I'm not teaching right now. We keep in touch and email each

other about articles related to education. So, I made an effort and built relationships with these older teachers, whereas in the past, I probably wouldn't have put in the effort.

Sport can facilitate linkages to community, as well as a sense of belonging amongst adolescent athletes (Fraser-Thomas & Côté, 2009). Athletes in our study also felt sport afforded opportunity to connect with their community. However, they also displayed an awareness of the potent social capital held by their connections, a unique aspect which was not present in adolescent athletes' accounts in previous research (Fraser-Thomas & Côté, 2009). This awareness was documented in their accounts of how they had profited or could profit in the future from their relationships with adults. Interestingly, the majority of athletes in our sample benefited from adult networks without discussing evidence of acquired networking skills. The current results provide initial evidence that mere participation in university sport affords athletes an awareness of positive social capital gained, even though many did not claim to have learned skills to tap this potential. One explanation for their inherited social capital may be that university athletes are privy to membership in an exclusive group of esteemed or well-connected alumni, simply by making the team. Altogether, our CIS athletes understood adult network and social capital as an increase in their personal and social worth by forming or improving relationships with important adults who could benefit their success in the future.

Interpersonal Relationships

Varsity athletes extensively discussed meaningful relationships during their university sport careers. All athletes spoke of a sense of community amongst the varsity athletes at their schools, and often referred to teammates as a second family (relationships with athletes). To illustrate, Laura said "being on a varsity team is basically a family away from home. Especially with me being an international student, one of the most important things in my life here is having them to reach out to." Athletes' closeness coincided to their belief that other athletes were the

only ones who truly understood what they were going through (athletes understand each other). Gillian stated:

> They understand a part of your life that is very meaningful to you which is not easy to understand if you are not in it. They understand how you are always busy, how you can get stressed, and how you can be tired. They understand how you can get upset about the coach and that kind of thing. So they know a side of you that isn't easy to understand if you are not on a team with them.

Very few studies have examined friendship in sport, and the majority have focused on youth and adolescent populations (for review see Partridge, Brustad, & Stellino, 2008). Within the context of youth and adolescent sport, Weiss and Smith (1999, 2002) identified six dimensions of quality friendships: self-esteem enhancement and supportiveness, loyalty and intimacy, things in common, companionship and pleasant play, conflict resolution, and conflict. In addition, Weiss and Smith (2002) found athlete friendships differed depending on age. Youth friendships (10-13 years old) involved spending time together and engaging in play, whereas, adolescent friendships (14-18 years old) embodied shared loyalty and similarities on values, beliefs and experiences. In our study, athletes described that athlete friendships were the most significant relationships they formed at university, and explained how negotiating similar sport experiences strengthened their relationships with their peers. The current results show the importance of athlete friendships for university-aged athletes, and set a precedent for examining how friendships can influence athletes' sport experiences, as well as personal growth. Overall CIS athletes understood interpersonal relationships as their social support system which was composed of other athletes, their coaches, and their family members, whereas relationships formed with other athletes were particularly important.

Teamwork and Social Skills

Through their daily cooperative tasks in practices and games, athletes acquired the knowledge and interpersonal skills needed to work effectively with their teammates (working with others). For instance, Kevin described how he established a positive team environment:

> Sometimes I do things that I might not voluntarily want to do in order to help build that social aspect of the team dynamics. I will do these little things to help us function better when we actually have to perform. I try to keep things light because the worst thing a captain can do is to start blaming other people. So I try my absolute best to never let that happen, and I think that my teammates appreciate that.

Many athletes believed that social skills learned in sport helped them improve team functioning at work and on school projects. Kevin explained how sport taught him that getting along was important for group performance, an approach he applied while working with others during his medical school residency:

> Because I have been forced to do it in sport, I have become more comfortable now engaging people in random or spontaneous conversation at work in order to create those relationships. I am much more conscious now that a good working social relationship amongst colleagues can really make a difference, especially when things start to go wrong. If you are on good social terms then things tend to go a lot more smoothly. I guess I have sort of known that forever, but now I have actually seen it in action through sport.

Through their frequent interactions with teammates, often in emotionally laden situations, athletes described that conflict was inevitable. Therefore, athletes described acquiring the social skills needed to tackle problems as soon as they occurred (conflict resolution). For instance, John described learning to confront teammates for behaving inappropriately:

> I had to learn to confront guys who weren't pulling their weight or who had behavioral problems. And it was really just about caring for the guys and making sure they were on track. For instance, there were some guys who were smoking a little too much, and it was just about being able to talk to them and letting them know it wasn't alright. In the past, I wouldn't have said anything and just let them figure it out themselves. But now I feel I can talk to them and steer them in the right direction.

Only one athlete felt her ability to deal with conflict depended on being in the sport environment. Karen said, "I think the ability to confront others is more of sport-specific skill for me". Conversely, many athletes said that having practiced conflict resolution with teammates helped them negotiate issues in class, at work, or in social situations. John described how he acquired the confidence to speak up:

> When I am with my group of friends I will certainly share my opinion if I think something is wrong. Even at work, I am not afraid and don't have to bite my tongue. I mean, I don't speak out of turn or act abrasively, but if I have an opinion and I think I am right and that it can be beneficial to the group or situation, then I will certainly share it. And a lot of that I learned from sport. I mean sometimes you have to take risks and just go for it. So I definitely think I take those lessons and behaviors outside of athletics.

Athletes also believed they developed leadership skills through their participation in university sport (leadership). They noted developing these skills through ample mentorship opportunities (with younger athletes) or formal and/or informal leadership roles on their teams. Justin explained:

> As I have gotten older, I can kind of see as a captain now that I am kind of here to help bring in the new people. I am still worrying about myself, but there is a lot more focus on my teammates now. So I try to lead and help mentor the younger people.

The athletes felt their sport leadership roles helped them transition into leadership positions on school projects and at work. Karen became comfortable addressing groups of individuals:

> I work with a lot of kids, so I am always in a leadership position now. I run groups all the time, and I feel I have really learned to get my point across. Part of it has come from my experience at work, but it all started with making sure that I was confident saying what I need to with my sport team. So I kind of built that confidence as leader in sport first.

A popular leadership lesson discussed was treating everybody as individuals. Leigh stated:

> I learned everyone has different ways of coping. So I have to be really supportive and just understand everyone's situations when talking to them. Because we all have different external stresses and different things we are dealing with on a personal level.

Our CIS athletes' accounts are in accordance with findings wherein former high school athletes believed their interpersonal skills were developed in high school sport and improved their ability to work with others at subsequent life stages (Kendellen & Camiré, 2015). However, our findings provide greater detail about the specific interpersonal skills (i.e., conflict resolution, leadership) that were refined through sport within the emerging adulthood stage. In addition, our results suggest that it is through sufficient practice while working with others in emotionally rich situations that athletes develop interpersonal skills related to teamwork.

When discussing leadership, many athletes articulated qualities that appeared consonant with transformational leadership, especially those related to individualized attention (Avolio, 2011). Hoffman and Loughead (2015) found that when university athlete mentors possessed

transformational qualities, their mentees believed they were receiving more guidance related to their professional and personal growth. The current study reveals that serving as a mentor or holding a formal/informal leadership position provides university athletes with a unique opportunity to practice such leadership qualities. In total, the CIS athletes understood team work and social skills as the ability to work with groups of people, which required leadership qualities, skills related to conflict resolution, as well as the ability to create positive working environments.

Negative Experiences

Although they had overall positive varsity experiences, all athletes acknowledged negative experiences related to being a student-athlete. The most prevalent challenge was stress related to perceived lack of time, especially when traveling (stress on time). Caroline explained:

> When we went to Nationals, we were away for a week or so and we missed school. Then trying to catch up on the school you missed, or getting work done like midterms that people missed. Just trying to catch up and knowing that you are going away for pretty much every weekend in season. So scheduling and balancing your whole life around soccer and then also trying to do school at the same time can be a bit hectic.

Another challenge athletes faced was conflict between players (tensions with other athletes), which often was exacerbated once the starting lineup was decided. Meagan explained:

> We have a couple of players who strongly dislike each other and it shows on the field. The coaches put up our starting line ups Thursday. On Friday, we have a practice, and we play on Saturday. And some girls won't show up on Friday if they are not playing. And then in practice, you are thinking 'ok, so because you are not in the top 15, you are not going to support us? You won't help us get better as a team?' It can be really frustrating.

This study is not the first to highlight adverse experiences associated with participation in school sport programs. Research has shown that stress related to balancing school and sport

demands (e.g., unable to study enough), and negative interactions among teammates are common experiences for university athletes (Abedalhafiz, Altahayneh, & Al-Haliq, 2010; Kimball & Freysinger, 2003). Our results add to the literature by specifically identifying that athletes are most stressed when spending extend time away from their studies to travel for games, and that conflict between athletes may be intensified when athletes receive deferential playing time.

Influence Outside of Sport

Athletes in this study spoke about skills, qualities, experiences, and relationships developed through university sport. For every outcome discussed, athletes were probed about how the outcome influenced their lives outside of sport. To date, the designation of life skill development in the sport literature has commonly been predicated on athletes' ability to transfer skills learned in sport to other domains of life (Gould & Carson, 2008; Theokas, Danish, Hodge, Heke, & Forneris, 2008). Our results showed that many skills learned in sport were also being used by athletes in other realms of life. For example, Aaron's applied skills related to scheduling and planning developed through sport, which he also at work. However, this was not true for all athletes, and in fact, some athletes directly stated that they did not use skills outside of sport. For instance, when Kelly stated that she did not set goals outside of sport.

Although some of our findings align with the traditional notions of life skill development and transfer, the current results suggest that a more encompassing definition may be needed to capture the full range of positive developmental outcomes associated with participation in university sport. For instance, athletes identified qualities (e.g., social awareness), experiences (e.g., experimenting within different roles), and relationships (e.g., adult network) that are not necessarily manifested as skills that can be taken from sport and willingly transferred to other environments. Despite not being skills (i.e., particular abilities to do something proficiently), the athletes expressed the profound positive influences these outcomes had on their lives. In the case

of adult networking outcomes, athletes inherited membership to an exclusive group of alumni whom were willing to help them succeed in life the moment they made their team. Through team membership, athletes also inherited an identity that was positively perceived by the general public, and were made aware that this perceptions was theirs to maintain through pro-social behaviors. Such an awareness, and the accompanying prosocial behaviors over the course of their varsity careers (4-5 years), will likely have a positive influence on their futures.

Hager and Hodkinson (2009) have also called into question the validity of the metaphor of transfer for "trying to understand what happens when people learn something new and/or move into new and different situations"(p.620). They noted that it is the learner who moves across situations and not a particular skill. Thus, they argue that as one moves from a context to another, one does not transfer skills, but rather enters a "transitional process of becoming" (p. 635) that is influenced by both contexts. Our results suggest that sport is an important context for university aged athletes as it affords them with rich opportunities to develop qualities, experiences, relationships, in addition to skills, that can improve their transitional process of becoming functioning members in sport and non-sporting contexts in society.

Conclusion

In this study, we used categories derived from the YES 2.0 to qualitatively describe athletes' perceptions of the skills, experiences, qualities, and relationships gained through their participation in CIS sport. Since athletes' quotes were readily housed within the broader YES 2.0 categories, our results provide initial support for the use of YES-based categories in understanding positive development in emerging adulthood within the context of Canadian university sport programs. In addition, our results provide support for the recent initiatives taken by the governing bodies of university sport in North America, and suggest that university sport

programs can provide a context that fosters positive development. However, since our interview guide and analyses were framed using the YES 2.0, which is a popular framework derived from younger cohorts, other facets related to emerging adult athletes' positive development may exist. Thus, one avenue for future studies would be to examine whether additional categories arise if a less targeted interview guide and an inductive analysis were used. Finally, although the current study provides an overall positive depiction of positive development and skills gained through participating in university sport, it is important to note that the athletes were purposefully selected based on having positive experiences. Therefore, there remains a need for future research to examine athletes who had less than ideal experiences to gain a full understanding of the developmental landscape of CIS sport.

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Table 1. Categories and sub-categories of developmental outcomes discussed by Canadian university athletes

Identity (15/15)	**Teamwork and social skills (15/15)**
Social awareness (10/15)	Working with others (13/15)
Multiple sources of identity (10/15)	Conflict resolution (13/15)
Lessons about one's self (10/15)	Leadership (10/15)
Improved confidence in one's self (7/15)	Understanding others (5/12)
Initiative (15/15)	Learning one's role (4/12)
Time management (15/15)	Respect (3/15)
Goal Setting (11/15)	Learning to work with coach (2/15)
Effort (8/15)	Learning second language (1/15)
Accountability (1/15)	**Adult network and social capital (15/15)**
Emotions and cognitive skills (15/15)	Networking (15/15)
Emotional regulation (15/15)	Personnel and resources to help with school (9/15)
Emotional experiences (7/15)	Volunteering and community involvement (8/15)
Learning from setbacks and failures (7/15)	**Negative experiences (15/15)**
Mentally stimulating aspects of sport (6/15)	Stress due to lack of time (13/15)
Mental skills training (3/15)	Conflicts with other athletes (10/15)
Importance of rest and recovery (2/15)	Missing out on non-athletic opportunities (3/15)
Interpersonal relationships (15/15)	Insufficient attention from coaches (2/15)
Relationships with athletes (15/15)	Little to no playing time (2/15)
Athletes understand each other (14/15)	Physical stress (2/15)
Family support (5/15)	Poor diet (1/15)
Close relationships with coaches (3/15)	Being on a losing team (1/15)
	Death of teammate (1/15)
	Financial issues (1/15)

Note. The bolded text represents YES 2.0 categories. The un-bolded text represents the sub-categories. The numbers found inside of parentheses represent how many of the participants discussed each category and subcategory.

Chapter Four

Article Three

Rathwell, S., & Young, B. W. (under review). Relationships between coaches' full range leadership behaviors and university athletes' personal and socio-emotional development.

Abstract

Objectives:

Coaches have cited the importance of developing their athletes' personal and social competencies (Vallée and Bloom, 2005). However, little is known about how university coaches actually promote such development. The purpose of this study was to explore the relationship between coaches' leadership behaviors and university athletes' developmental outcomes and negative experiences resulting from their participation in university sport.

Design:

A total of 605 Canadian university athletes (Mage = 20, SD = 1.74) completed the Multifactor Leadership Questionnaire (Avolio & Bass, 2004) and the University Sport Experience Survey (Rathwell & Young, 2016). Multilevel modeling was used to evaluate the cross-sectional relationships between coaches' behaviors and athletes' developmental outcomes and negative experiences related to university sport.

Results:

Transformational coaching was generally related to positive developmental outcomes and inversely related to athletes' negative experiences in sport. Coaches' corrective behaviors were relatively unrelated to athletes' development when examining developmental outcomes and negative experiences. Finally, coaches' passive/avoidant behaviors were commonly related to athletes' negative experiences in university sport. However, contrary to expectation, passive/avoidant coaching behaviors were positively related with a number of positive developmental outcomes.

Conclusions:

The current results provide support for the benefits of transformational coaching behaviors when targeting positive development (Vella et al., 2013), and suggest that university sport may be a unique setting where passive/avoidant leadership behaviors can produce positive outcomes.

Keywords: University sport; Positive Development; Coaching; Emerging adulthood; Full Range Leadership

Positive youth development is a strength-based applied developmental science that borrows theoretical traditions from developmental psychology (Lerner, Brown & Kier, 2005). One context where positive development has garnered considerable scientific attention is sport (Holt, 2016). According to Holt, Deal, and Smyth (2016), positive youth development through sport involves the developmental experiences and processes that enable participants in adult-supervised programs to gain transferable personal and social life skills that will enable them to thrive and contribute to their communities. Nearly all research focuses on conditions of positive sport development of youth, however, in keeping with Arnett's (2000) description of emerging adulthood (18 to 25 years old) as extended adolescence and a sustained period of personal and socio-emotional development, the current study investigated positive sport development in university athletes.

Grounded within Larson's domain experiences measurement framework (Dworkin, Larson, & Hansen, 2003; Hanson & Larson, 2005; Larson, Hansen, Moneta, 2006), Rathwell and Young's (2016a) study explored the developmental outcomes and experiences that athletes gain from their experiences in university sport. They found five positive developmental outcomes (initiative, basic skills, interpersonal relationships, teamwork and social skills, adult networks and social capital) and four negative experiences (stress, negative peer interactions, social exclusion, and inappropriate adult behavior) that were pertinent to university athletes' sport participation. Rathwell and Young defined initiative as self-regulatory capabilities related to goal-setting, effort, planning, and discipline. Basic skills incorporated athletes' creativity and ability to find information. Interpersonal relationships were the relationships athletes formed with others from different socioeconomic and ethnic backgrounds. Teamwork and social skills were proficiencies related to working with others. Adult networks and social capital were the

important off-campus social networks that athletes developed as a result of their sport participation. For the negative experiences, Rathwell and Young identified stress (i.e., mental and emotional strain related to being a university athlete), negative peer interactions (e.g., immoral or risky behavior such as alcohol or drug consumption), social exclusion (i.e., athletes' experiences of marginalization from others), and inappropriate adult behaviors (i.e., experiences of misplaced behaviors, interactions, or expectations that athletes faced from their coaches or team leaders) as pertinent to university sport experiences. Although research has shown that university sport can result in tangible developmental outcomes and experiences (e.g., Rathwell & Young, 2016a; Watt & Moore, 2001), little is known about the role of coaches in fostering athletes' positive/negative development and how various leadership processes influence such development in university sport.

Evidence exists from qualitative studies on university coaches that suggests coaches may have a significant role in fostering athletes' developmental outcomes and experiences. University sport coaches have stated they value the holistic development of their athletes, and have explained how they incorporate approaches to address their athletes' personal and socio-emotional development within their coaching philosophies (Flett, Gould, Paule, & Schneider, 2010; Rathwell, Loughead, & Bloom, 2014). For instance, in a study by Vallée and Bloom (2005), university coaches believed they were responsible for providing the necessary structure and support to foster their athletes' personal development. Thus, these coaches purposely invested in building self-confidence, enhancing maturity, and creating a sense of ownership in their athletes. Although some university coaches have cited the importance of developing their athletes' personal and social competencies, little is known about how coaches actually promote

such development and whether/how university athletes perceive their coaches' distinct leadership behaviors as influencing these competencies.

The Full Range Leadership Model (FRLM; Avolio, 2011) is a useful leadership paradigm for investigating how coaches can influence university athletes' outcomes and experiences. Unlike most other models of sport coaching that focus on performance outcomes, it additionally considers the development of followers in terms of values and ethics, pro-social behavior, personal growth and sportspersonship (Hoption, Phelan, & Barling, 2007). The FRLM framework proposes that transformational leaders can elevate followers to new heights by developing followers' leadership capacity via coaching, mentoring, and provision of both challenge and support (Bass & Riggio, 2006). In essence, the FRLM appears well suited to examining processes by which a leader might transform followers on personal and socio-emotional outcomes (Turnnidge & Côté, 2016). Indeed, researchers have advocated for transformational coaching, a central feature of FRLM, to be used as a catalyst for positive development through sport (Holt, 2016; Turnnidge & Coté, 2016; Vella, Oades, & Crowe, 2010).

According to the FRLM, optimal development (i.e., performance and personal development) occurs when leaders frequently use effective behaviors and are highly involved in followers' development (Avolio, 2011). The FRLM differentiates three distinct leadership processes (laissez faire, transactional, and transformational leadership) which differ in degree of involvement and the nature of the interactions that a coach has with athletes. Notably, an underlying premise of the FRLM is that the three leadership processes are not mutually exclusive, and most leaders exhibit all three types of behaviors concurrently, while displaying each specific type to varying degrees (Avolio, 2011).

Laissez faire leadership is considered the least involved form of leadership and is typically characterized by an absence of leadership. Transactional leadership is a more active leadership process composed of contingent reward, passive management by exception, and active management by exception (Avolio, 2011). Contingent reward emphasizes the coach's role in observing desired behaviors and outcomes in their followers and then providing reinforcement. Passive management by exception involves the coach observing and waiting for errors to arise before taking corrective action. Active management by exception also involves corrective action; however, rather than passively waiting, leaders prevent errors from occurring by actively monitoring for deviances.

Transformational leadership is the most active process, comprising four behaviors: inspirational motivation, idealized influence, intellectual stimulation, and individual consideration (Avolio, 2011). Inspirational motivation describes the role of the leader in forming a vision of a desirable future, articulating how the vision can be accomplished, and setting high performance standards. Idealized influence includes the leader's modeling of behaviors that reflect their values and beliefs, and which are needed to accomplish the vision. Intellectual stimulation refers to the leader's behaviors that challenge followers to question their assumptions and find creative/resourceful solutions to problems. Finally, individual consideration implicates the role of the leader in fostering personal growth by customizing followers' development according to their individual needs and abilities.

Previous research on FRLM coaching behaviors has focused primarily on the effects of transformational leadership on athlete outcomes and experiences without concurrently considering the relationships attributed to transactional and laissez faire leadership. In this vein, researchers have found a wide range of positive psychosocial outcomes and experiences

associated with transformational leadership in sport. Specifically, coaches' transformational behaviors are related to higher athlete commitment (Saybani, Yusof, Soon, Hassan, & Zardoshtian, 2013), organizational citizenship behavior (Lee, Kim, & Kang, 2013), extra effort (Arthur, Woodman, Ong, Hardy, & Ntoumanis, 2011), well-being (Stenling & Tafvelin, in press), team cohesion (Callow, Smith, Hardy, Arthur, & Hardy, 2009), and satisfaction (Rowold, 2006). Less evidence exists on the full range of behaviors as they have been conceived relative to each other in the FRLM, since only a few studies have examined all three processes concurrently (e.g., Bormann & Rowold, 2016; Price & Weiss, 2013; Rowold, 2006). When assessed concurrently with transformational leadership, transactional and laissez fair leadership have been shown to be associated with athlete outcomes (Rowold, 2006). Specifically, Rowold found laissez faire leadership predicted lower athlete effort and satisfaction and transactional leadership predicted increased athlete effort.

Recent literature pertaining to younger sport cohorts has focused almost exclusively upon one form of FRLM leadership, transformational coaching, and its relationship to positive sport development (Holt, 2016; Turnnidge & Coté, 2016; Vella, Oades, & Crowe, 2010). Turnnidge and Coté (2016) argue that (a) transformational leaders' focus on enabling followers to reach their full potential aligns well with the goals of positive development through sport, which are to build transferable personal and social skills needed to effectively contribute to society, (b) transformational leaders have the ability to help followers develop a strong sense of self which can promote positive development (c) transformational leaders have been shown to promote positive and reduce negative emotions in followers (d) transformational leadership involves building quality relationships with followers, which has been shown to result in elevated levels

of satisfaction, commitment, and well-being, and (e) transformational leaders attempt to unify groups, which may foster the strong interpersonal relationships amongst group members.

Preliminary research supports transformational coaching in promoting positive developmental outcomes and reducing negative experiences in youth settings (Vella, Oades, & Crowe, 2013a, 2013b). For instance, Vella et al. (2013b) found coaches' transformational leadership behaviors were positively related with athletes' life skill development (i.e., personal and social skills, goal setting, initiative, and cognitive skills) and inversely correlated with negative sport experiences. Vella et al. (2013a) implemented a transformational coach training program and found that athletes of trained coaches had more positive experiences than athletes from untrained coaches. However, due to requests from sport clubs for their athletes to remain completely anonymous, Vella et al. (2013a) were unable to follow participants from pre- to post-intervention and were limited by methodological concerns surrounding the assessment of within subject variance.

As evidenced above, the FRLM has only recently begun to be explored in coaching research, especially as it relates to positive development. Despite the noteworthy efforts of initial researchers, gaps in the literature remain. Specifically, a) FRLM research related to positive sport development has focused on youth cohorts, with none looking at older cohorts (i.e., emerging adults), b) no studies to our knowledge have examined how all three FRLM processes (transformational, transactional, and laissez faire) relate to developmental outcomes concurrently, and c) most studies examining how FRLM behaviors influence positive sport development have relied on preliminary analyses (i.e., descriptives and simple correlations). The current study will address these limitations by using a multilevel analytic approach to exploring the relationship between coaches' FRLM behaviors (i.e., transformational, transactional, and

laissez faire) and university athletes' developmental outcomes (initiative, basic skills, interpersonal relationships, teamwork and social skills, adult networks and social capital) and negative experiences (stress, negative peer interactions, social exclusion, and inappropriate adult behavior) resulting from their participation in university sport.

We posited the following:

Hypothesis 1: Based on Vella et al.'s (2013b) findings from youth sport, we hypothesized that athletes' perceptions of their coaches' transformational leadership behaviors would be directly associated with their perceptions of positive development outcomes (i.e., initiative, basic skills, interpersonal relationships, teamwork and social skills, adult networks and social capital) and inversely related to negative experiences (stress, negative peer interactions, social exclusion, and inappropriate adult behavior).

Hypothesis 2: Few studies in sport exist from which we could draw hypotheses related to transactional leadership. However, theory (Avolio, 2011) and past research outside of sport (Bass, 1999) suggests that transactional leadership should produce similar outcomes as transformational leadership, only to a lesser degree. Accordingly, we hypothesized that athletes' perceptions of coaches' transactional leadership behaviors would be directly associated with their perceptions of positive development outcomes and inversely related to negative experiences. In general, we expected the associations to mirror those found for transformational leadership, but with weaker associations.

Hypothesis 3: Similar to transactional leadership, few studies have examined the effects of laissez faire leadership in sport. However, Rowold (2006) found laissez faire

leadership predicted lower athlete effort and satisfaction, and laissez faire leadership is consistently linked with negative follower outcomes outside of sport (Bass, 1999). Thus, we hypothesized that university athletes' perceptions of coaches' laissez faire leadership behaviors would be inversely related to positive developmental outcomes and directly related to negative experiences.

Method

Recruitment

Prior to collecting data, approval was received from the Research Ethics and Integrity at the authors host university. To recruit participants, e-mail invitations were sent to head coaches that described the purpose, procedures, and potential benefits of this study. Coaches were asked to disseminate a recruitment letter to their athletes which directed athletes to a personal link to a website where they could complete a consent form, a demographic questionnaire, and an online survey.

Survey Measures

Full Range Leadership. The Multifactor Leadership Questionnaire (MLQ-5X; Avolio & Bass, 2004) was used to assess coach leadership behaviors. It consists of 36 items representing three leadership processes (i.e., transformational, transactional, and laissez faire leadership), which are assessed using nine subscales. Transformational leadership was measured with five subscales (i.e., idealized attributes, idealized behaviors, inspirational motivation, intellectual stimulation, and individualized consideration), transactional leadership with three subscales (contingent reward, management-by-exception active, and management-by-exception passive behaviors) and laissez faire with one subscale. The MLQ-5X assessed the frequency to which athletes' perceived their coaches to have displayed behaviors related to each leadership process using a Likert scale ranging from 0 (not at all) to 4 (frequently, if not always). Prior to

administration, the authors purchased a MLQ reproduction license (invoice #27971) from Mind Garden Inc. No alterations were made to the MLQ items. However, before completing the MLQ, the athletes were provided the following instructions:

> Beginning on the next page, you will be asked to read statements describing various leadership styles and asked to judge how they pertain to the coach with whom you interact with the most. Please judge how frequently each statement fits your coach. When judging each of the statements, consider your coach's leadership styles as they relate to your experiences as a student-athlete. This includes all requirements placed on you by your varsity sport organization (university sport team). Organizational requirements should be understood as the various roles and duties that your coach expects of you as a student athlete.

Positive Development and Negative Experiences. The University Sport Experience Survey (Rathwell & Young, 2016a) measures athletes' perceptions of positive development, as well as their perceptions of negative experiences related to their participation in university sport. This survey consists of 46 items representing five positive development outcome subscales (initiative, basic skills, interpersonal relationships, teamwork and social skills, and adult networks and social capital) and four negative experience subscales (stress, negative peer interactions, social exclusion, and inappropriate adult behavior). Participants judged the degree to which they agreed with statements about outcomes resulting from their experience in university sport. Each question opened with the stem: *As a result of my involvement in university sport* and was followed by an item. For example, one item measuring teamwork and social skills was "I am better at giving feedback". Agreement was assessed using a 7-point Likert scale ranging from 1 *Strongly disagree,* to 7 *Strongly agree*. Notably, the current sample was used in a

multiphase study dedicated solely to establishing psychometric properties of the USES. Specifically, using the current sample of athletes, a popular positive development measurement tool that was grounded within Larson's domain experiences measurement framework (Dworkin et al., 2003; Hanson & Larson, 2005; Larson et al., 2006) was modified to create a tool that is specific to university sport (i.e., the USES). Next, with data from an independent pan-Canadian sample of university athletes, the psychometric properties of the USES were confirmed with both confirmatory factor analysis and exploratory structural equation modeling. For in-depth psychometric properties of the USES pertaining to the current sample, as well as a detailing of all the individual items, please see Rathwell and Young (2016a). Analyses performed in that study gave us confidence in the factorial reliability and validity of the USES.

Screening

A total of 621 athletes completed the survey. To ensure they were representative of the typical Canadian university student athlete, participants needed to be a) between the ages of 17-25 and b) a member of a competitive university sport team. Fourteen athletes were older than 25 and their data were removed. The screening measures were used to ensure that our sample was representative of the typical age of university athletes. Following the initial screening, a missing data analysis was performed and results indicated only (0.36%) of the data were missing. When less than 5% of data are missing, influences of missing data are negligible (Tabachnick & Fidell, 2013). Missing data were treated with multiple imputations using an expectation-maximization method (Tabachnick & Fidell, 2013). Data were then screened for outliers. Two cases were identified through Mahalanobis distance as extreme multivariate outliers with $p < .001$ and were removed (Kline, 2010).

Participants

The final sample consisted of 605 athletes (237 male, 368 female; M_{age} = 20, SD = 1.74) from 205 different teams across Canada. Athletes represented 47 universities and all were registered in full time studies. The athletes competed in 26 different university sports, 373 were members of CIS teams and 232 were members of competitive club teams sanctioned by conference or provincial organizations (e.g., Ontario University Athletics). Soccer was the most represented sport (20%), followed by rugby (14%), rowing (13%), cross country (9%), track and field (5%), basketball (5%), lacrosse (5%), and volleyball (5%). The remaining 18 sports were represented in less than five percent of the data. In total, 201 first year, 178 second year, 110 third year, 69 fourth year, and 47 fifth year student-athletes participated. Within their teams, 369 athletes held starting positions, 157 were non-starters, 29 were practice team members, and 50 athletes did not know their player status.

Analyses

Using the Mplus software program (Muthén, L. K., & Muthén, B. O., 2012), we performed confirmatory factor analysis (CFA) procedures to evaluate model fit and to test the structural relationships between MLQ-5X and USES outcomes. A robust maximum likelihood estimator (MLR) was used for all analyses. MLR produces both standard errors and tests of model fit. A number of indices were used to assess model fit: Comparative Fit Index (CFI), Standardized Root Mean Square Residual (SRMR), Root Mean Square Error of Approximation (RMSEA), and the normed chi-square (χ^2/df). Hair et al. (2010) suggested good model fit is reached if: CFI $\geq$ 0.90, SRMR $\leq$ 0.08, RMSEA $\leq$ 0.05, and $\chi^2/df \leq 5$.

Results

Confirmatory Factor Analysis on the MLQ-5X

An initial CFA was performed on the nine-factor 36-item model suggested by Avolio and Bass (2004). Results indicated that the latent variable covariance matrix (PSI) was not positive

definite due to extreme multicollinearity amongst MLQ factors. Price and Weiss (2013) also found similar results when testing the factor structure of the MLQ-5X in sport. Following the precedent set by Price and Weiss (2013), we ran a separate CFA on a three-factor 46-item model. In line with their procedures, the first factor was labeled as 'transformational leadership' and was identified to incorporate transformational leadership items and contingent reward items. Although modeling contingent reward with transformational leadership items is not entirely in keeping with theory, our results supported Price and Weiss' (2013) protocol. For instance, the correlation between contingent reward and the transformational leadership factors ranged from .88 to .98. This means that contingent reward was explaining between 77% and 96% of the same variance as the transformational leadership factors. Thus, if contingent reward was modeled as a separate construct from transformational leadership, the extreme multicollinearity between factors would create unstable parameter estimates and would make it extremely difficult to detect relationships between the independent and dependent variables within the model. The second factor contained active management by exception items only and was labeled as 'corrective leadership'. The third factor consisted of passive management by exception items and laissez faire items and was labeled 'passive/avoidant' leadership. As with transformational leadership, our results supported Price and Weiss' (2013) decision to combine passive management by exception items and laissez faire items due to multicollinearity issues (r =.88).

Although the latent variable covariance matrix (PSI) was now positive definite, summary statistics showed fit issues for the three factor model: CFI = .852, SRMR = .067, RMSEA = .058 (90% *CI* = .055 – .061), and χ^2/df = 3.042. In order to improve model fit, we first consulted modification indices. Based on the results we allowed the error terms for items 28 and 33 to covary. Next, an iterative process of deleting poorly loading items and re-examining model fit

was performed (Byrne, 2010). Items six, nine, 11, 17, 25, and 29 were removed. The removal of these items resulted in a three-factor (transformational, corrective, passive/avoidant) 30-item model that showed adequate model fit: CFI = .900, SRMR = .059, RMSEA = .053 (90% CI = .050 – .057), and $\chi^2/df = 2.729$. The removal of any additional items reduced model fit, thus, we used this model for all subsequent analyses. Each factor had a construct reliability (CR) score above .7 except the corrective factor which was .65. CR scores above .7 indicate strong internal consistency reliability, while CR scores between .6 and .7 indicate adequate internal consistency reliability (Hair et al., 2010). All factor loadings were significant and above .32 (range = .50 – .81). Correlations between the three subscales ranged from .03 to -.63.

Confirmatory Factor Analysis on the USES

The psychometric properties of the USES related to the current sample of athletes had been explored in depth in a dedicated psychometric article by Rathwell and Young (2016a). For the purpose of this study, we only present the summary statistics. Results for the nine-factor 46 item model showed good fit: CFI = .921, SRMR = .049, RMSEA = .038 (90% *CI* = .035 – .040), and $\chi^2/df = 1.859$. All factors had CR scores above .7. All factor loadings were significant, ranging from .44 to .89. Correlations between subscales ranged from .04 to .72.

Multilevel Modeling

In light of the fact that data were nested (athletes within teams), we examined the relations between coaches' behaviors and athletes' developmental outcomes using a multilevel modeling framework. In this study, 605 athletes were nested within 205 teams. Multilevel approaches allow researchers to consider two levels of hierarchically structured data simultaneously by partitioning the variance into within (individual) and between group (team) components, which allows for separate structural models to be specified at each level (Kline, 2010). Multilevel structural equation modeling was initially attempted using the full latent

variable structure. Although the model terminated normally, the model was non-identified due to having more parameters than the number of clusters (i.e., teams).

In order to reduce the number of parameters, factor scores were calculated using the regression method (Tabachnick & Fiddell, 2013) and a multilevel path analysis was run. Intra-class correlations for the factor scores ranged from .06 to .19, with five factors having intra-class correlations above .10. These results justified the use of multilevel modeling since the intra-class correlations indicated a meaningful amount of variance was present at the group level (Selig & Card, 2008). Since a multi-level path analysis (using factor scores) was run, and we assumed that each type of leadership (*transformational, corrective,* and *passive/avoidant*) would predict each of the nine USES variables (*initiative, basic skills, interpersonal relationships, teamwork and social skills, adult networks and social capital, stress, negative peer interactions, social exclusion,* and *inappropriate adult behavior*), the model was just-identified. This means there were no degrees of freedom and perfect model fit was assumed. Before running our path model, data were assessed for violations of normality. There were no instances of univariate skewness, however initiative (k = 3.67) and stress (k = 3.43) showed some evidence of kurtosis (see Table 1 for descriptive statistics). Tabachnick and Fidell (2013) have described that when sample sizes are greater than 200, issues related to estimated variance associated with kurtosis disappear. As a result, no transformations were made to the current data.

Of note, although the labels for the coach leadership processes were altered (i.e., transformational, corrective, and passive avoidant) following the CFA, our hypotheses initially posited for transformational, transactional and laissez faire dimensions remained intact for these newly labelled dimensions. At the *individual level* (see Table 2), our hypotheses were partially supported. Transformational leadership was positively related to initiative, basic skills,

interpersonal relationships, teamwork and social skills, and adult networks and social capital, and inversely related to social exclusion and inappropriate adult behavior. Passive/avoidant leadership was positively related to stress, negative peer interactions, social exclusion, and inappropriate adult behavior. Contrary to what we expected, corrective leadership was not significantly related to any outcomes. Further, passive/avoidant leadership was significantly and positively related to basic skills and interpersonal relationships. At the individual level, the structural model predicted the following variances: inappropriate adult behavior (21%), teamwork and social skills (17%), initiative (16%), stress (13%), interpersonal relationships (10%), social exclusion (9%), basic skills (5%), negative peer interactions (5%), and adult networks and social capital (4%).

At the *team level* (see Table 2), our hypotheses were also partially supported. Transformational leadership was positively related to initiative, basic skills, and interpersonal relationships, and inversely related to negative peer interactions. Passive/avoidant leadership was significantly related to negative peer interactions. Unexpectedly, corrective leadership was also significantly related to negative peer interactions, and passive/avoidant leadership was positively related to initiative, basic skills, and interpersonal relationships. At the team level, the structural model predicted the following variances: interpersonal relationships (90%), basic skills (88%), inappropriate adult behavior (76%), stress (66%), social exclusion (51%), initiative (49%), teamwork and social skills (45%), negative peer interactions (32%), and adult networks and social capital (21%).

Discussion

The purpose of this study was to test the relationship between coaches' FRLM leadership behaviors and university athletes' developmental outcomes and negative experiences related to

university sport. Although the data fit the factor structure of the USES (Rathwell & Young, 2016), Avolio and Bass' (2004) hypothesized factor structure for the MLQ-5X was not supported. Issues with the psychometric properties of the MLQ are not novel to this study. In fact, it is common for the psychometric properties of the MLQ to fail to be confirmed inside sport (e.g., Price & Weiss, 2013) and outside of sport (e.g., Tejeda, Scandura, Pillai, 2001). Further, issues with contingent reward loading with transformational leadership, and laissez faire leadership loading with passive management by exception are not unusual (Yukl, 1999). Together, these results call into consideration the measurement of Full Range Leadership Model as defined by the MLQ-5X. The developers of the MLQ have strict copyright laws that prohibit authors from publishing the list of MLQ-5X items. Further, the developers request that researchers not modify the measure. Unfortunately, as is the case in this study, this often becomes necessary in order to meet the basic standards requirements for the reliable and valid measurement of the constructs. In this study, we offered a potential three factor solution that had good psychometric properties and was consistent with previous sport research (Price & Weiss, 2013). Moreover, as a means to facilitate replication in future research, we have provided our instructions given to athletes prior to completing the MLQ-5X (Avolio & Bass, 2004), and have listed the items in the order to which they are found within the MLQ-5X manual (Avolio & Bass, 2004).

Following precedence set by Price and Weiss (2013), we now discuss our prior hypotheses related to transformational, transactional, and laissez faire leadership behaviors through the lens of the three leadership dimensions that emerged (i.e., transformational, corrective, and passive/avoidant leadership). Relationships between coaches' behaviors and athletes' development were assessed at the individual and team level. At both levels, when

athletes reported that their coaches displayed frequent transformational behaviors, they also judged themselves to have developed stronger self-regulatory capabilities related to goal setting, effort, planning, and discipline (initiative), to have improved their creativity and ability to find information (basic skills), and had developed stronger personal relationships with others from different backgrounds (interpersonal relationships). In addition, by taking into consideration the nested nature of our data, this study provides the first indications of how transformational leadership uniquely influences both individual and team level outcomes in university sport. Exclusive to the individual level, when athletes perceived more transformational behaviors from their coach, they also believed they had developed greater skills for working with others (i.e., teamwork and social skills), perceived they had developed stronger ties to their off campus communities (adult networks and social capital), felt less excluded from others (social exclusion), and experienced fewer inappropriate or misplaced behaviors from their leaders (inappropriate adult behavior). Unique to the team level, when teams experienced more transformational behaviors, as a group they were less likely to report engaging in immoral or risky behaviors (negative peer interactions).

Our results relating to transformational leadership, while tested concurrently with corrective and passive/avoidant coaching, align with similar findings from researchers who examined the isolated developmental benefits of coaches' transformational leadership. For example, Vella and colleagues (2013b) found that transformational coaching behaviors were positively correlated with adolescent soccer players' development of personal and social skills, cognitive skills, initiative, and goal setting. After implementing a transformational coach training program, Vella et al. (2013a) found youth athletes of trained coaches had more positive experiences related to cognitive skills and goal setting than athletes from coaches who did not

participate in the program. Taken together, the current results support coaches' use of transformational leadership when positive development is a targeted outcome. Further, these results suggest the benefits of transformational leadership are not limited to the youth sport setting. Our results also extend positive development in sport literature by examining the effects of transformational leadership in a way that was more consistent with FRLM theory (Avolio, 2011), that is, by examining the influence of transformational leadership while considering its relationship to transactional (corrective) and laissez faire (passive/avoidant) behaviors.

Although novel to the field of positive development in sport, the current study is not the first to examine the concurrent effects of all FRLM coaching behaviors. Price and Weiss (2013) tested a full FRLM model with female adolescent soccer players and found coaches' transformational leadership behaviors were positively related to athletes' perceived competence, enjoyment, task cohesion, and collective efficacy. However, one limitation to the Price and Weiss' (2013) study was that they did not consider the nested nature of their data. In the current study, we found FRLM coaching behaviors were particularly well suited for predicting variance at the team level. This may be especially relevant to transformational leadership considering the emphasis transformational leaders place on creating mutual goals and a shared vision (Avolio, 2011; Bass & Riggio, 2006). Thus, the current findings suggest that it is important to assess team level effects of FRLM coaching, at least in university sport settings.

Contrary to our hypotheses, corrective leadership had no relationship to any athlete outcomes at the individual level. Price and Weiss (2013) also found non-significant associations between coaches' corrective leadership and athlete outcomes when examining athletes' perceived competence, enjoyment, and intrinsic motivation. In our work and in Price and Weiss, corrective leadership was operationalized as coaching behaviors that were directed towards

identifying mistakes and notifying players when mistakes were made. Contingent reward, which usually measures the interactive relational aspect of exchanges within transactional leadership, instead merged with the transformational components of leadership behaviors as a result of our CFA of the MLQ-5X. Thus, of the three leadership dimensions assessed in both studies, corrective leadership was the only one that was a) absent of a relational component and b) had little impact on athletes' developmental outcomes. Together, these results suggest that coaching approaches that simply make athletes aware of their mistakes without a relational component to their feedback may have little effect on psycho-social development in emerging adults or student-athletes. One interpretation of these results may be that that the coach-athlete relationship (Jowett & Ntoumanis, 2004) has an important influence on university athletes' development. However, it is possible that the coach athlete relationship is only important for personal and socio-emotional outcomes like the ones measured in this study. For instance, it is possible that corrective coaching may be more beneficial to outcomes specific to athletes' on-field technical/tactical performance rather than to personal and socio-emotional outcomes.

Also contrary to our hypotheses, we found that when corrective behaviors were experienced frequently at a team level, athletes reported more frequent engagement in immoral or risky behaviors (negative peer interactions). To account for this finding, it is important to consider the cross-sectional nature of our data. On one hand, it is possible that that coaches' use of corrective behaviors leads to more team-level immoral or risky behaviors. Conversely, it is also possible that when teams engage in immoral or risky behaviors as a team, coaches are more likely to react with corrective behaviors. We speculate that the second scenario is more plausible.

Our hypotheses related to passive/avoidant leadership were partially supported. On one hand, passive/avoidant leadership was positively correlated with stress, negative peer influences,

social exclusion, and inappropriate adult behaviors at the individual level and negative peer interactions at the team level. These results are consistent with the adverse effects of passive leadership styles both in and outside of sport (e.g., Bass, 1999; Price & Weiss, 2013; Rowold, 2006). Contrary to our hypotheses, passive/avoidant leadership was positively related to athletes' self-reported development of basic skills, and interpersonal relationships at both the individual and team level, as well as development of initiative at the team level. One explanation for these results may be that passive/avoidant leadership has paradoxical benefits for athletes because it causes stress and exposes them to adversity. The current finding align with the positive growth through sport literature (Tamminen & Neely, 2016), an emerging body of research that has begun to explore the potential for positive growth through athletes' experiences of adversity and challenges in sport. From a positive growth perspective, the use of passive/avoidant behaviors may increase athletes' level of stress by challenging them to deal with adversity, which may foster the development of personal competencies (i.e., initiative, basic skills) or place athletes in situations where they need to rely on their teammates for help (i.e., interpersonal relationships).

It is also possible that passive/avoidant behaviors are better suited for athletes who are in the developmental period of their lives known as emerging adulthood. Spanning from 18 to 25 years of age, this is a unique time period where emerging adults explore new opportunities and possible identities as they gain unparalleled levels of independence (Arnett, 2000). Recently, Rathwell and Young (2016b) posited that because of their age and stage of development, university athletes may possess a stronger capacity for autonomous action towards their own development than youth athletes. Student athletes in their study described much of their development in university sport settings occurring through a 'trial by fire' process, and believed they were themselves the most important agents in their own development. Taken together, these

results suggest that university athletes may require less adult-driven intervention to experience positive development through sport than younger sport cohorts, and that at times they may actually benefit from a seeming absence of coach leadership.

Of note, our current understanding of passive/avoidant leadership is framed from the perspectives of athletes only. Thus, we cannot know whether coaches' passive/avoidant behaviors were performed deliberately to remove external coaching supports and instead foster more self-regulated learning strategies in athletes. Although we cannot infer coaches' deliberate use of passive/avoidant behaviors to promote change of agency to athletes, our results at the very least interrogate whether there may be some benefits to such behaviors, which runs counter to predominant FRLM literature which commonly attaches a negative valence to passive/avoidant and laissez faire processes.

Strengths and Limitations

A strength of the current research is the use of multilevel modeling to investigate the relationships between FRLM behaviors and developmental outcomes in university sport. The current study is the only one to our knowledge to assess all three dimensions of the FRLM with a multilevel approach – interpreted as transformational, corrective, and passive/avoidant leadership. Simply, most research examines individual perceptions of coaching with little consideration of group/team effects, and most research examines transformational leadership, without considering its effects alongside neighboring coaching dimensions in a manner that is faithful to the FRLM. Another strength of the study was the large sample of athletes collected from competitive university teams across Canada. Specifically, the fact that athletes were sampled from 205 teams across 47 universities speaks to the generalizability of our results.

In addressing the limitations to this study, several opportunities for future research became apparent. First, although we discussed the potential importance of the relational components of the leadership dimensions, we did not measure coach-athlete relational aspects specifically. Future research might test whether the coach-athlete relationship mediates the relationship between coaches' leadership behaviors and athletes' development. Second, as many authors have done in the past (e.g., Arthur et al., 2011; Price & Weiss, 2013; Rowold, 2006), we adopted a variable-centered approach. That is, we focused on the separate effects of each leadership dimension without considering how they interact. However, based on the conceptualization of the FRLM (Avolio, 2011), it is possible that a combination of leadership behaviors is more effective than any one dimension on its own. Thus, another possible avenue for future research would be to examine whether certain FRLM coaching profiles (e.g., experiencing transformational frequently, transactional moderately, and laissez faire rarely) are more ideal for promoting personal and social development in university sport.

Conclusion

The current study provides one of the first accounts of the relationships between coaches' full range of leadership behaviors and athletes' personal/developmental outcomes in the context of university sport. Consistent with theory, transformational coaching was generally related to positive developmental outcomes and inversely related to athletes' negative experiences in sport. In contrast, coaches' corrective behaviors were relatively unrelated to athletes' development when examining personal and socio-emotional outcomes, as well as when looking at negative sport experiences. Finally, coaches' passive/avoidant behaviors were commonly related to athletes' negative experiences associated with university sport. However, contrary to

expectation, passive/avoidant coaching behaviors were also positively related with a number of positive developmental outcomes.

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Table 1. Scale Descriptives and Correlation Matrices for the estimated factor scores used in the mutilevel analyses.

	TL	CL	PL	IN	BS	IR	TS	AN	ST	NP	SE	IB
TL	-											
CL	.09*	-										
PL	-70**	.26**	-									
IN	.40**	.04	-.16**	-								
BS	.16**	.15	.04	.51**	-							
IR	.28**	.17**	-.05	.67**	.80**	-						
TS	.36**	.13**	-.15**	.79**	.53**	.75**	-					
AN	.19**	.05	-.08	.47**	.48**	.52**	.41**	-				
ST	-.25**	-16**	.32**	-.26**	.09*	-.07	-.17**	.04	-			
NP	-.16**	.07	.22**	-.06	-.03	-.05	-.11**	-.16**	.39**	-		
SE	-.25**	.06	.28**	-.32**	-.05	-.17**	-.27**	-.22**	.44**	.58**	-	
IB	-.46**	.12**	.50**	-.24**	-.06	-.13**	-.24**	-.18**	.50**	.48**	.58**	-
M	3.23	2.05	0.85	5.08	3.81	5.17	5.54	4.47	1.58	3.57	2.14	1.90
SD	0.66	0.48	0.62	0.68	0.87	0.83	0.76	1.14	0.86	1.07	1.28	1.09
Skewness	-1.10	0.00	1.23	-1.16	-0.06	-0.48	-1.01	-0.32	1.72	-.216	0.92	1.33
Kurtosis	1.30	-0.47	1.32	3.67	-0.12	1.15	2.37	-0.22	3.43	-0.54	0.04	1.31

Note. TL = Transformational Leadership, CL = Corrective Leadership, PL = Passive Avoidant Leadership, IN = Initiative, BS = Basic Skills, IR = Interpersonal Relationships, TS = Teamwork and Social Skills, AN = Adult Networks and Social Capital, ST = Stress, NP = Negative Peer Interactions, SE = Social Exclusion, IB = Inappropriate Adult Behavior. *M* = Mean, *SD* = Standard Deviation. * $p \leq .05$, ** $p \leq .01$.

Table 2. Parameter estimates (standardized beta weights) derived from the multilevel model.

	β		Standard error		*t* value		*p* value	
Path	Within	Between	Within	Between	Within	Between	Within	Between
TL → IN	0.47	1.57	0.05	0.76	8.50	2.07	< .001**	.03*
TL → BS	0.27	1.79	0.06	0.85	4.29	2.10	< .001**	.04*
TL → IR	0.39	1.78	0.06	0.77	6.92	2.33	< .001**	.02*
TL → TS	0.47	1.45	0.06	0.87	7.95	1.68	< .001**	.09
TL → AN	0.25	0.75	0.06	1.01	3.91	0.74	< .001**	.46
TL → ST	-0.07	1.12	0.07	0.95	-1.06	1.18	.29	.24
TL → NP	-0.00	-1.46	0.06	0.62	-0.05	-2.34	.96	.03*
TL → SE	-0.16	1.01	0.06	2.75	-2.69	0.37	.007**	.71
TL → IB	-0.22	-0.13	0.06	0.47	-3.75	-0.27	< .001**	.79
CL → IN	-0.03	-0.04	0.04	0.27	-0.78	-1.45	.44	.14
CL → BS	0.03	0.21	0.05	0.24	0.63	0.84	.53	.40
CL → IR	0.03	0.27	0.05	0.21	0.69	1.28	.49	.20
CL → TS	0.03	-0.05	0.04	0.25	0.68	-0.18	.50	.86
CL → AN	-0.02	0.18	0.05	0.34	-0.45	0.53	.65	.60
CL → ST	0.02	-0.08	0.05	0.31	0.37	-0.26	.71	.80
CL → NP	0.00	0.77	0.04	0.23	0.03	3.33	.98	.001*
CL → SE	0.02	0.09	0.04	0.57	0.45	0.15	.65	.88
CL → IB	0.04	0.10	0.04	0.19	0.83	0.54	.41	.59
PL → IN	0.11	1.68	0.06	0.80	1.91	2.10	.06	.04*
PL → BS	0.18	1.74	0.06	0.87	2.85	2.00	.004**	.05*
PL → IR	0.17	1.56	0.05	0.79	3.20	1.98	.001**	.05*
PL → TS	0.10	1.45	0.06	0.94	1.83	1.54	.07	.12
PL → AN	0.09	0.48	0.05	1.00	1.45	0.48	.15	.63
PL → ST	0.17	1.28	0.07	1.05	2.34	1.23	.019**	.22
PL → NP	0.36	-1.37	0.07	0.61	5.49	-2.24	< .001**	.03*
PL → SE	0.17	1.37	0.07	3.62	2.65	0.38	.008**	.70
PL → IB	0.28	0.72	0.07	0.46	4.02	1.56	< .001**	.12

Note. β = Standardized beta weights. TL = Transformational Leadership, CL = Corrective Leadership, PL = Passive Avoidant Leadership, IN = Initiative, BS = Basic Skills, IR = Interpersonal Relationships, TS = Teamwork and Social Skills, AN = Adult Networks and Social Capital, ST = Stress, NP = Negative Peer Interactions, SE = Social Exclusion, IB = Inappropriate Adult Behavior.
*$* \leq .05$. **$\leq .01$.

Supplemental Material

Table 3. Scale Descriptives and Correlation Matrices for the estimated factor scores used in the standard SEM analyses.

	TL	CL	PL	IN	BS	IR	TS	AN	ST	NP	SE	IB
TL	-											
CL	.07	-										
PL	-55**	.18**	-									
IN	.30**	-.01	-.06	-								
BS	.13**	.11**	.11**	.35**	-							
IR	.26**	.16**	.01	.42**	.55**	-						
TS	.34**	.11**	-.07	.56**	.38**	.56**	-					
AN	.17**	.03	-.04	.35**	.35**	.38**	.32**	-				
ST	-.11**	.04	.17**	-.02	-.02	-.02	-.07	-.13**	-			
NP	-.17**	.17**	.23**	-.17**	.05	-01	-.08*	.04	.25**	-		
SE	-.20**	.07	.25**	-.21**	-.04	-.12**	-.20**	-.17**	.48**	.31**	-	
IB	-.45**	.09*	.46**	-.16**	-.09	-.13**	-.18**	-.17**	.37	.29**	.49**	-
M	3.83	2.91	1.78	5.62	3.93	5.13	5.70	4.77	4.20	2.07	2.91	2.43
SD	0.74	0.83	0.73	0.85	1.22	0.96	0.83	1.33	1.39	1.06	1.35	1.39
Skewness	-1.00	-0.05	1.19	-1.12	-0.00	-0.56	-0.99	-0.37	-0.21	1.38	0.61	1.02
Kurtosis	1.07	-0.39	1.09	3.06	-0.31	0.93	1.96	-0.21	-0.58	2.06	-0.24	0.38

Note. TL = Transformational Leadership, CL = Corrective Leadership, PL = Passive Avoidant Leadership, IN = Initiative, BS = Basic Skills, IR = Interpersonal Relationships, TS = Teamwork and Social Skills, AN = Adult Networks and Social Capital, ST = Stress, NP = Negative Peer Interactions, SE = Social Exclusion, IB = Inappropriate Adult Behavior. *M* = Mean, *SD* = Standard Deviation.
* $p \leq .05$, ** $p \leq .01$.

Supplemental Material

Table 4. Parameter estimates (standardized beta weights) derived from standard SEM analyses.

Path	β	Standard error	*T* value	*p* value
TL → IN	0.53	0.06	8.50	< .001**
TL → BS	0.31	0.07	4.24	< .001**
TL → IR	0.45	0.07	6.62	< .001**
TL → TS	0.50	0.07	7.36	< .001**
TL → AN	0.25	0.08	3.38	.001**
TL → ST	0.00	0.08	0.01	.98
TL → NP	-0.09	0.07	-1.48	.14
TL → SE	-0.10	0.07	-1.48	.14
TL → IB	-0.03	0.07	-3.76	< .001**
CL → IN	-0.09	0.05	-1.63	.10
CL → BS	0.07	0.06	1.15	.25
CL → IR	0.11	0.06	1.73	.09
CL → TS	0.06	0.05	1.15	.25
CL → AN	-0.00	0.06	-0.08	.94
CL → ST	0.01	0.07	0.21	.84
CL → NP	0.02	0.06	2.80	.005**
CL → SE	0.02	0.06	0.34	.73
CL → IB	0.07	0.05	1.36	.17
PL → IN	0.23	0.07	3.53	< .001**
PL → BS	0.28	0.08	3.59	< .001**
PL → IR	0.25	0.07	3.57	< .001**
PL → TS	0.20	0.07	2.85	.004**
PL → AN	0.11	0.08	1.31	.19
PL → ST	0.21	0.08	2.61	.009**
PL → NP	0.22	0.09	2.62	.009**
PL → SE	0.21	0.08	2.69	.007**
PL → IB	0.36	0.08	4.58	< .001**

Note. β = Standardized Beta weight. TL = Transformational Leadership, CL = Corrective Leadership, PL = Passive Avoidant Leadership, IN = Initiative, BS = Basic Skills, IR = Interpersonal Relationships, TS = Teamwork and Social Skills, AN = Adult Networks and Social Capital, ST = Stress, NP = Negative Peer Interactions, SE = Social Exclusion, IB = Inappropriate Adult Behavior.

* $\leq .05$.

** $\leq .01$.

Chapter Five

Article Four

Rathwell, S., & Young, B. W. (2017). Describing aspects of self and social agency related to Canadian university athletes' positive development. *PHEnex Journal/Revue phénEPS, 8,* 1-16.

Abstract

Gould and Carson (2008) called for research to uncover the underlying mechanisms related to how positive development occurs through sport. The purpose of this study was to identify who is responsible for university student-athletes' development of life skills, through the lens of student-athletes. Semi-structured open-ended interviews were conducted with fifteen Canadian university athletes (5 male, 10 female; M_{age} = 22, range = 17-26). Data were analyzed using deductive and inductive thematic analyses (Braun & Clarke, 2006). Athletes identified other athletes, the head coach, the coaching staff, and their parents as the people who influenced their development. However, athletes felt they themselves were the ones who contributed the most to their own development in the context of university sport. Our findings provide a preliminary summary of how aspects relating to self-agency and various social agents influence athletes' acquisition of life skills through their participation in university sport.

Keywords: University Sport; Positive Development, Life Skills; Qualitative Research

Recently, Gould and Carson (2008) highlighted several limitations in the literature on life skill development, or positive youth development in sport. Specifically, they addressed the need for more research to uncover the underlying mechanisms related to how life skill development occurs through sport. Life skills are defined as ‘‘skills that enable individuals to succeed in the different environments in which they live, such as school, home and in their neighborhoods. Life skills can be behavioral (communicating effectively with peers and adults) or cognitive (making effective decisions); interpersonal (being assertive) or intrapersonal (setting goals)’’ (Danish, Forneris, Hodge, & Heke, 2004, p. 40). The aim of this study is to understand life skill development in university sport settings.

To our knowledge, no conceptual framework exists for understanding life skill development in the context of university sport. Therefore, we elected to frame our study using notions borrowed from an established framework found within the youth sport literature (Petitpas, Cornelius, Van Raalte, & Jones, 2005). Petitpas and colleagues (2005) put forward four characteristics of sport programs that foster the development of life skills. Having caring and supportive adults, peer, and community members who challenge athletes to improve themselves and provide supervisory boundaries to activities is one of these characteristics. The current investigation examined this tenet; more specifically, our research focused on exploring the extent to which student-athletes believe certain social agents influence their life skill development through sport in university programs.

When looking at the youth sport setting, research has identified coaches, parents, and peers as having the greatest influence on athletes’ sport experiences (Camiré, Trudel, & Forneris, 2009; Fredricks & Eccles, 2004; Holt, Tamminen, Tink, & Black, 2009; Lavoi & Stellino, 2008; Steelman, 1995). Much of the current empirical knowledge on coaches comes from a small

number of qualitative studies that have examined the strategies and behaviors of outstanding high school coaches (e.g., Camiré, Trudel, & Bernard, 2013; Camiré, Trudel, & Forneris, 2012; Gould, Collins, Lauer, & Chung, 2007; Trottier & Robitaille, 2014). Consistently, these studies found that outstanding coaches incorporated athletes' life skill development within their annual coaching plans, had clear and consistent rules, acted as role models, developed close relationships with athletes, customized their athletes' experiences, and provided developmental opportunities in environments that were psychologically safe for their athletes. Less information is available on the roles of parents and peers in fostering life skill development. However, research suggests that parents often serve as the initial socializing agent for children entering sport, and peers begin to take on a more prominent roles a children enter adolescence (Fredricks & Eccles, 2004).

Currently, little is known about who influences athletes' development of life skills at the university level. Rathwell and Young (2016) found university athletes believed they developed a number of important life skills through their participation in university sport. Specifically, athletes felt their participation in university sport helped them develop self-regulatory capabilities related to goal setting, effort, planning, and discipline, improved their creativity and ability to find new information, and taught them important teamwork and social skills. Although preliminary, these results suggest that university sport programs may offer potentially fruitful environments for fostering life skill development. Still, a dearth of information exists on how athletes acquire their life skills and who influences the fostering such development, from the athletes' perspectives.

A few studies have found that head university coaches say that the personal and socioemotional development of their athletes is their responsibility (Flett, Gould, Paule, &

Schneider, 2010; Rathwell, Bloom, & Loughead, 2014; Vallée & Bloom, 2005), although, none have specifically addressed how coaches foster such development and whether athletes can explicitly acknowledge these efforts. There is also some evidence that assistant coaches might have a role in athlete' development of life skills (Rathwell, Bloom, & Loughead, 2014; Sinnotte, Bloom, & Caron, 2015). However, this was not the focus of Rathwell and colleagues' (2014) or Sinotte et al.'s (2015) studies. Further, how assistant coaches foster development and whether athletes acknowledge their efforts remains unknown. As to other agents such as parents and peers, little is known about these people and the roles they have in fostering university athletes' life skill development.

The purpose of this study was to identify the agents responsible for university student-athletes' development of life skills through university sport, and to describe how athletes perceived each agent's influence on their development. Specifically, we asked a) Who was responsible for athletes' development or acquisition of life skills? and b) What role did each agent play in athletes' acquisition and development of life skills?

Method

Participants

Fifteen Canadian Interuniversity Sport (CIS) athletes (5 male, 10 female; M_{age} = 22, range = 17-26, *SD* = 2.71) agreed to participate in this study. The athletes lived in six different Canadian provinces (i.e., Ontario, Quebec, New Brunswick, Saskatchewan, Alberta, and British Columbia) and came from 12 universities. The sample consisted of three first-year, two second-year, four third-year, one fourth-year, and five fifth-year eligible student-athletes; all were registered in full time studies. Athletes represented a variety of team and individual sports: cross country (n = 3), soccer (n = 3), ice hockey (n = 2), rugby (n= 2), volleyball (n = 2), football (n =1), curling (n =1) and track and field (n = 1).

Recruitment and Screening

Ethical approval was granted from the host university. Following ethical clearance, the first stage of our research was an online survey in which 605 university athletes participated. In the survey, athletes were required to answer questions related to their perceived positive developmental experiences using a modified version of Hansen and Larson's (2005) YES 2.0 survey, a popular quantitative measure of life skill development experiences. The quantitative survey data are reported fully elsewhere (see Rathwell & Young, 2016). For this study, we were only interested in CIS athletes who answered the survey and who had reported positive experiences in sport. In the second stage of the recruitment, athletes' data were screened to purposively identify candidates. In order to be classified as an athlete who had positive developmental experiences, athletes needed to have average scores of five or above (out of seven) on the positive dimensions of the YES 2.0 survey. In total, 34 athletes met our screening criteria and were invited to participate in this study. Of the 34 athletes invited, 15 agreed to participate.

Collection of Data

Data were collected through semi-structured open-ended interviews. Interviews lasted on average 57 minutes (range = 40-77 minutes). Seven interviews were conducted in-person and eight were performed over Skype. Prior to data collection, the interview guide was piloted with two university athletes to ensure that the wording and sequence of probes were constructed in a way that allowed athletes to take responsibility for their own development, or to assign responsibility to others without leading them. For a description of how the wording and sequence were constructed see interview guide section below. The primary researcher conducted all interviews.

Interview Guide. The interview guide consisted of four sections. The first section was designed to establish rapport and introduce the topic (i.e., what does it mean to you to be a varsity athlete?).

The second section was designed to capture life skill development associated with university sport. The life skills that we explored were informed by seven themes derived from the YES 2.0 (Hansen & Larson, 2005); they were identity, initiative, emotions, cognitive skills, adult network and social capital, positive relationships, and teamwork and social skills. Themes derived from Hansen and Larson's (2005) positive developmental categories have been shown to be valid estimates of positive development within Canadian university sport contexts (Rathwell & Young, 2016. In order to maintain the integrity of the YES 2.0, the first author familiarized himself with the items in each scale and created interview questions that captured the overall themes of each scale. Next, the second author acted as an external check and reviewed the interview questions to ensure that the wording was coherent with each respective YES 2.0 subscale theme.

The third section was designed to identify the agents responsible for athletes' development of life skills. In this section, questions were purposefully phrased to allow athletes to assign responsibility for their development to themselves, or to others. For instance, athletes were asked "Where did you learn this? Was this outcome self-initiated, or did you learn it from others?" If athletes mentioned someone who influenced their development, they were then probed about how that person influenced their development (e.g., how did this person influence your development?). Athletes were then probed about whether they felt anyone else helped shape their development (e.g., did anyone else have an influence?). This process continued until all influential agents were exhausted. Finally, if the coach had not been mentioned after naming all

relevant influences, the interviewer probed the respondents about the role of their coach (What about your coach? Did he/she have an influence?).

The fourth section contained concluding questions which gave athletes the opportunity to add information they believed was relevant or missing from their responses.

Data Analysis

Our data were analyzed using a combination of deductive and inductive thematic analysis according to guidelines by Braun and Clarke (2006). In the first phase, the first author became familiarized with the data by transcribing each interview verbatim and repeatedly reading the finished transcripts. In the second phase, initial codes were created by segmenting the data into individual units of text that could be interpreted in a meaningful way. In the third phase, a deductive approach was taken, and the initial codes were grouped within the higher order themes derived from the YES 2.0 (i.e., identity, initiative, emotions, cognitive skills, adult network and social capital, positive relationships, and teamwork and social skills). In the fourth phase, an inductive approached was used, whereby the data were scanned within each of the higher order YES 2.0 themes for identifying information on the agents responsible for athletes' development. In the final phase, we combined all of the information regarding each agent across all themes. By doing so, we created higher order themes related to each identifiable agent of influence within our data.

Validity

In this study, we attempted to enhance the accuracy of our findings by comparing independent researchers' coding and using participant feedback as an external check to the research process (Yardley, 2008). Both authors read all of the interview transcripts to familiarize themselves with the data. The first author coded all of the data, but during this process, both authors met repeatedly to discuss the emerging codes in order to increase the consistency and

coherency of the analysis. As a further external check, participants were allowed to verbally add, modify, or exclude any comments or ideas at two time points: a) at the end of their interview, and b) after receiving full verbatim transcripts of their own interview (Yardley, 2008). No athletes requested to add, modify, or exclude any comments or ideas at either time point.

Limitations

Although steps were taken to enhance the accuracy of our findings, our results presented below must be considered in light of their limitations. First, athletes were the only source of our data and these beliefs may not be shared or align with the perspectives of other agents found within athletes' sport context (i.e., head coach, support staff, parents, and athletic department). Second, for this study, we specifically selected athletes who had positive growth experiences in university sport. Therefore the results presented below represent a view of outstanding programs and may not depict the average experience and support system of university athletes.

Results

The purpose of this study was to identify who was responsible for fostering university athletes' development of life skills. Although we have noted the deductive analysis of our data according to YES 2.0 themes, and we necessarily acknowledge specific life skills (i.e., identity, initiative, emotions, cognitive skills, adult network and social capital, positive relationships, and teamwork and social skills) in our results, our focus for the rest of this paper is on who was responsible for the development of athletes' life skills, and not the actual life skill outcomes themselves. Athletes identified *themselves,* the *support staff, family members,* and *head coaches* as the agents responsible for their acquisition and development of life skills. In this section, athletes were assigned a number (A1-A15) to credit their statements while protecting their anonymity.

Self as Agent

It was originally anticipated that athletes would speak primarily about how other agents influenced their development. However, what emerged from our data was that athletes felt they themselves were the biggest contributor to their own life skill development within the context of university sport. They described that varsity sport exposed them to scenarios where they were forced to learn emotional regulation, time management, and social skills on their own through trial and error. For instance, one athlete described that the competitive nature of university sport required him to adapt and learn to regulate his emotions:

> I would say it is just through experience. It is almost a survival of the fittest type thing. If you don't learn to regulate your emotions, you won't survive. Especially in university sport, if you can't perform under pressure, your career won't last very long. So you just sort of figure it out and learn to handle it, because if you don't, you are done. (A4; Football)

Many athletes discussed learning to manage their busy academic and athletic schedules through their failures. One athlete described how she learned from her academic shortcomings:

> A lot of it was on my own. I remember after exams in first year being like ‘wow, I was not ready for those at all’. So now when I have a test, I remember the times where I had five days to study for an exam and only studied for two. Back then, I didn't completely understand what it took, but I do now. (A2; Hockey)

Another athlete described learning after performing poorly at practice:

> You definitely have to kind of learn the hard way for a couple of things, I guess. So the times where you leave things until the last minute and you can't go to bed until you are finished the paper, but you still have six AM training. Well, then you are up all night, you

> end up not sleeping, and then you go straight to training and you just suck out there. (A5; Soccer)

Athletes also discussed acquiring social skills through trial and error. Specifically, they said that interacting with teammates, who possessed a wide range of personalities, helped them learn different ways of handling situations:

> The locker room has so many different people in it, so you really get a 'trial by fire' experience. You meet so many people who handle things in so many different ways and you get to see what works and what doesn't. You try stuff and see if it fits, and sometimes it doesn't. So you learn different ways to handle different types of people. (A4; Football)

Experiences in leadership roles on their teams were important for athletes' development of social skill. For instance, one athlete described how occupying a leadership position afforded her the opportunity to practice taking charge of groups:

> When I was a rookie or a second year player, I didn't think I was in a position to say anything. But then, in third year, I was given a fitness captain role. That really helped me take on more leadership. So I really focused on my warm ups and cool downs and making sure that the other girls were doing what they needed to. That kind of was a first step in my leadership development. I was able to learn from how others responded to me in that role. After that I got a letter [captaincy] and that gave me even more responsibilities and opportunities to work on my leadership. (A2; Hockey)

Although the student athletes felt their life skills development was primarily self-directed, they described how they also had a network that consisted of support staff, family members, other athletes, and the head coach, who provided assistance when needed.

Notable Agents

Support staff. Athletes described how if they needed help, a number of university staff

members were at their disposal. Specifically, athletes mentioned sport psychologists, assistant coaches, academic advisors, professors, trainers, and physiotherapists. All of the support staff members played an integral role in helping athletes form adult networks. As one athlete noted, her trainers purposefully tried to advance athletes' professional careers:

> Both of the trainers that we have for all of the varsity teams are very inspiring. They also care about us and have a lot of connections and are pretty open about using them to help us build our careers. I think they definitely help with that. (A3; Hockey)

Of all the support staff, athletes' most often identified their sport psychologist as the person with whom they worked with to improve other skills related to a) social skills (e.g., "I learned about conflict resolution in the mental sessions that we have with our sport psychologist."; A3; Hockey), b) mental skills (e.g., "We have our own sport psychology consultant and she taught me over the past five years how to use imagery"; A8; Volleyball), and c) goal setting (e.g., "the sport psychologist for our team taught me how to set goals"; A2; Hockey).

Family. When asked about their personal development during their time in university sport, athletes rarely mentioned family members. However, one consistent finding was that family members were an important social support system. One athlete said:

> My family's support has been key for me over the years. Because a lot of times, when dealing with things, I would just pick up the phone and call my brother instead of going and asking coach or a teammate. So, a lot of my personal development, even during university, has come from the support of my family. (A8; Volleyball)

Other Athletes

Of all the agents within the university sport context, teammates had greatest influence on where and how athletes learned time management skills and emotional regulation. Athletes

learned about emotional regulation by observing how their teammates dealt with emotional situations, or by learning techniques and strategies from them following an emotional event. One athlete said her teammates taught her to interpret events more positively:

> I learned to manage my emotions by talking about it with teammates. If something happened, we would chat about how it made us feel. Then, if we had different point of views, we would try to understand each other's. So, if after a game, I was like 'oh my god, this game is going to ruin our season', and someone else said 'no it won't, we have three games coming up where we can really change things', then I would learn a new way of interpreting it, and that would calm me down. (A6; Volleyball)

Athletes also learned to manage their time through interactions with teammates. One athlete noted:

> Everybody on the team manages their time differently, but everyone still has to manage their time in a sort of similar way. So we can ask each other for strategies for how to do it and things like that. Especially in first year, because you are new to the whole thing. So I learned from being on a team and learning how others were able to keep up with all of the school work we have. (A1; Soccer)

An important component to athletes' acquisition of life skills was peer mentorships. One athlete said:

> A huge benefit about being a varsity athlete is that you have friends who are years above you, which is something you don't usually have if you are just a student. So I have girls on my team who are in my program and I can ask them how they coped with a class and what their strategies were for an exam. I think it is a huge help because it is like you can

> see into the future and know what is coming. So it makes it easier to deal with. (A3; Hockey)

Another athlete provided more insight into athlete mentorships by describing her roles as a mentor in her final year:

> There were three younger girls studying in physiotherapy and I acted as an academic mentor. They would always ask me questions about a subject or they would ask for help with the material, or how I managed my schedule around courses and stuff like that. So it isn't just about helping with sport, it is also about helping out with their success in their studies, which makes the relationship special too. (A6; Volleyball)

Head Coach

How head coaches influenced athletes' acquisition and development of life skills was more complex than the other agents found within the context of university sport. Just like the other agents, head coaches could impact athletes' development through their direct interactions with them. However, unique to the head coach position, was the ability to influence athletes' development without interacting with them directly.

Direct influence. Head coaches were particularly important in creating a team identity that was consistent with the values of their university. Head coaches often created rules of conduct that facilitated feelings of unity amongst team members and fostered a sense of communal identity. One athlete shared:

> Our program is very strict. For example, on Friday, we have to wear a jersey, shorts, and our socks pulled up. We all have to look the same. We can't roll our shorts or anything. So everyone is on the same playing ground. And our coach really emphasizes being respectful and stuff too. So if we go away somewhere, or even at a home game, we are expected to be on our best behavior. It is just little things like that. (A11; Rugby)

The athletes also felt their head coaches were instrumental in building their adult network. These connections with adults helped them foster summer and part time employment, internships, and future opportunities. For instance, one athlete described how her coach used his connections to improve her chances at getting into teaching college:

> My coach used to actually be a teacher, and I am going into teaching next year. So the schools that I am looking at are all through connections that I have made through my coach. So it's just the little things he helps with, but when you look at the bigger picture, it is not that little. (A9; Track and Field)

When it came to working with athletes on specific personal skills, athletes' perceptions regarding their head coaches were varied. For instance, only a few athletes said their head coaches worked directly with them on regulating their emotions. One athlete described how her head coach taught her strategies to help her overcome her negative thoughts:

> I would sit with my coach after my game and we would go through how the game went and how I handled things. At first, I was extremely tough on myself, and I wanted to develop skills for dealing with that. So my coach worked with me on positive self-talk. She asked what went on in my head and what I told myself after making a mistake, and I realized I was often just saying 'I can't make a mistake again', or 'I can't do this again', or 'why did you do this?'. It was all very negative. So I learned to make my self-talk to be more positive, which helped. (A8; Volleyball)

In contrast, other athletes reported that they did not work with their head coach on emotional regulation. One athlete said, "I don't really work with my coach on that (emotional regulation). We have individual meetings, but I have never brought it up, so we never talked about it" (A3; Hockey).

Similarly, only some athletes had head coaches who assisted them with goal setting. One athlete described working closely with his head coach when planning his season:

> We set up two or three one-on-one meetings a year where we lay out what our season will look like. So next year, we have university cross country Worlds and I told him that I am committing to them. So Worlds is the end goal and I will do whatever it is going to take to get there. So we set up some times and placings that we want to hit throughout the season. So we will make me a schedule that will get me there. Then it is up to me to put in the effort and to make the right decisions in order to get myself there. (A12; Cross Country)

Conversely, other athletes admitted their head coach had no role in facilitating their ability to set goals. As one athlete said, "I would say no, he (head coach) did not have a part in teaching me to set goals" (A14; Curling).

Some athletes also reported that their head coaches helped them manage their busy academic and athletic schedules. One athlete described how her coach eased her transition into first year in university:

> This is the first time I am away from home and doing school and soccer on my own. So my coach was supportive and helped me plan stuff. If I needed anything then he would help. Whether that involves choosing my classes or helping identify when I can get something done. He also offers to moderate our exams and midterms [on the road], and was super helpful about scheduling. Even beforehand, when I was picking my course schedule, he was like 'we are going to have training here, so you are going to want to go more on this day and less on this day'(A7; Soccer).

On the other hand, other athletes said their head coaches had no influence on their ability to

manage their time. As one athlete explained:

> At university, the head coach mostly expects you to figure your own stuff out. If you are going to university and have no idea what you are doing in terms of studying or time management skills, you are pretty much screwed (A5; Soccer).

Finally, some athletes believed their head coaches taught them important social skills related to teamwork, leadership, and conflict resolution. For instance, one athlete described working with her coach on her approach to giving feedback to teammates:

> Every two weeks I sit down with coach and we meet about what is going on with the team, what I can do better, what I am doing well, and how I can address certain issues. I give a lot of tough love and I am very straight forward with people. And I have learned through the years that girls don't necessarily react the best to that. So the 'Oreo technique', you know, say something good, then something negative, and then finish with something good. That is something I learned from my coach. She has worked with me over the years and has helped me become the leader I am today. (A8; Volleyball)

Others athletes noted that their head coaches valued their ability to work with teammates, but did not directly teach them how. One athlete described, "Our coach hasn't really helped us with that (working with teammates), but he does think it is important" (A10; Cross Country).

Indirect influence. Head coaches also had the ability to affect athletes' development without having to interact with them directly. For instance, athletes discussed how their coaches often delegated the task of teaching life skills to their support staff. As one athlete summarized at the end of the interview:

> I thought that you were going to ask more about my coach and I was going to honestly tell you that, as much as he does help, he doesn't really interact with us directly very

> often. So I think this interview was good because he does help, but it is kind of hard to answer questions about that because he runs the team. So we don't have that much time to just sit down and have chats with him. So I think the questions were good, because a lot of what my coach does is through other people and is more indirect. (A3; Hockey)

Coaches also indirectly influenced their athletes' development by mandating and monitoring their attendance in programs offered by the athletic department. Many athletes told us they were required to volunteer, for instance, "We have a varsity mentor program where we work with at risk kids. It is mandatory in the first year, but I stayed on because I liked it." (A15; Rugby). Others commented on their attendance at coach-mandated study hall: "Every team has study hall twice a week for two hours, which is mandatory for first years. Ours is Tuesday and Thursday from 7:30 to 9:30 at night." (A5; Soccer). Often, these mandatory programs occurred in athletes' first year of university sport and were positioned to help them transition into their roles as student athletes. Athletes later described positive outcomes related to their experiences in study hall (i.e., time management) and volunteering (i.e., networking).

The most commonly reported method through which head coaches had an indirect influence on athletes' development was through the designation of a leadership position on their team (i.e., captain or leadership group). Interestingly, some athletes were aware of their head coaches' indirect influence on their development, while others were not. On one hand, one athlete recognized his coach set the stage for him to become a leader:

> I am a guy who never misses a workout, never fails in school, and is never late for a meeting. By my third year, my coach took notice and started looking to me in certain situations or used me as an example of what people should be doing. By doing so, he sort of set the stage for me to take a leadership role. So at the beginning, I was timid, but once

> I knew that people saw me as a leader, I began to embrace it and started to own it. So it all started with the coach giving me the opportunity to take on a leadership role and then once it caught on, it was almost like testing the water and I ran with it. (A4; Football)

On the other hand, other athletes did not attribute their leadership assets to the coach. For instance, one athlete described how his experience as captain helped foster his leadership skills:

> I think being the captain gives me the opportunity to try to set examples for the younger players. Especially, as a student doing my second degree I am the oldest on the team by quite a fair margin. So having that as well as the title of being the skip gives me those opportunities to develop leadership skills. (A14; Curling)

When the same athlete was subsequently asked whether his coach helped develop his leadership skills, he said "Not this particular coach. Maybe, earlier on, some of my coaches would have but not this current coach." (A14; Curling). However, when probed whether he was voted into this role or whether his coach appointed him captain, the same athlete said "it was decided by the head coach" (A14; Curling).

Discussion

In this study, we sought to identify who was responsible for fostering athletes' development within the context of university sport. Athletes identified themselves, other athletes, the head coach, the athletic support staff, and family members as the agents responsible for their development of life skills.

Novel to this study was athletes' central role in their own development. Specifically, athletes described learning emotional regulation, time management, and social skills through 'trial by fire' scenarios where they were forced to try out various approaches in response to challenges, while fending for themselves. The current results contrast most positive development

research on younger sport cohorts, where the direct teaching of life skills by adults is believed to be integral to athlete development (Petitpas et al., 2005). In fact, adult supervision is so ingrained within positive development through sport that it has been included as a central component within the most recent operational definition:

> "PYD (Positive Youth Development) through sport is intended to facilitate youth development via experiences and processes that enable participants in *adult supervised programs* to gain transferable personal and social life skills, along with physical competencies..." (Holt, Deal, & Smyth, 2016, p. 231).

Our results suggest that at the university level, adults (i.e., coaches) continue to provide some structure to help athletes develop, but it is the athletes themselves who drive their own day to day development. We offer two potential explanations for this discrepancy. First, it is possible that university athletes as a cohort have a stronger capacity for autonomous action towards their own development, thus, requiring less adult driven intervention. This interpretation is consistent with the developmental stage of emerging adulthood (Arnett, 2006). Spanning from 18 to 25 years of age, emerging adulthood is the final transition period from youth to adulthood and characterized by an increase in independence from others and a need for emerging adults to self-experiment and discover the consequences of their own actions (Arnett, 2000). This interpretation can also explain the reduced role of athletes' parents in the context of university sport.

Alternatively, it is also possible that the nature of our probing allowed us to better uncover the important influences of self and peer agents in athletes' lives. Prior to the study, and in line with Holt et al. (2016)'s definition above, we believed that coaches would have a great influence on athletes' acquisition and development of life skills. Thus, in creating the semi-structured interview guide, we made a point to guard against this personal bias by intentionally

sequencing our probes to give athletes the option to take responsibility for, or attribute their development to anyone, adult or not, before we finally explicitly probed them about their coach. Unfortunately, the nature and sequence of qualitative interview probes are rarely discussed in positive development in sport publications, thus, it is difficult to know whether athletes in previous research were given the same opportunity to discuss other valuable influences before being probed about adults (i.e., the coach). In using an open-ended probing sequence, unlike findings in positive youth/adolescent development, our findings showed 'self-as-agent' of development to be the driving force behind university athletes' acquisition of life skills.

Of all the agents within the university sport context, other athletes appeared to have the most direct role in fostering university student-athletes' acquisition of life skills. The importance of mentorships received from teammates was notable in this study. Athletes discussed how mentorships helped buffer their transition into university sport by facilitating their developing of time management and emotional regulation assets required to manage their increased academic and athletic demands. Consistent with our results, Hoffmann and Loughead (2015) found that university athletes who were mentored by their peers were significantly more satisfied with themselves, their teammates, and their coaches, than athletes who had not received an athlete mentorship. Taken together, these results suggest that peer mentors might improve athletes' satisfaction by providing them with superior life skills, which allow them to more readily navigate the demands of varsity sport and the dual (and sometimes competing) roles of a student-athlete. Furthermore, these findings provide additional evidence of the reduced role of adults within the context of university sport, as peers become more central to university athletes' development.

The current results also add to the literature by providing a nuanced depiction of the role of the head coach in university athletes' acquisition of life skills. In the past, university coaches have cited the importance of athletes' personal development and have claimed that fostering such development is one of their main roles as a university coach (Flett et al., 2010; Rathwell et al., 2014; Vallée & Bloom, 2005). However, the process through which they influenced athletes' was not discussed. In this study, athletes noted their head coach's direct role in fostering their development related to identity and adult networking. In addition, some athletes had head coaches who worked with them directly on time management, goal setting, and emotional regulation skills. However, this was not true for all athletes, and many described that head coaches were not involved directly in the teaching of specific skills.

Athletes also acknowledged the ways in which their head coaches influenced their development without having to interact with them directly. One indirect strategy that head coaches used was identifying competent support staff members and delegating the teaching of life skills to them. The use of other agents to teach athletes life skills is consistent with past research that had examined head coaches' perceptions of the roles and responsibilities of head assistant football coaches (Rathwell et al., 2014). Specifically, Rathwell and colleagues found head coaches were less involved in athletes' day to day development and provided different knowledge and leadership than their assistant coaches. In our study, where athletes were free to discuss all members of the coaching staff, we found the support staff, especially sport psychology consultants, assisted athletes with their development related to networking, social skills, mental skills, and goal setting. These results highlight the importance of sport psychology consultants for fostering various life skills within the context of university sport. These findings have practical implications for coach education programs and suggest that modules or training

related to the development of life skills might have more impact if they target key members of the support staff.

Another indirect way through which head coaches influenced athletes' development was by placing them in scenarios where they had opportunities to acquire life skills. This included awarding athletes with a leadership position on their team, and by mandating and monitoring their attendance in programs offered by the athletic department. These programs included study hall and various community outreach programs. Through their exposure to these different social contexts, athletes gained experiences where they could experiment and develop life skills such as emotional regulation, time management, and social skills through trial and error. Notably, after coaches placed athletes within these social contexts, athletes' development was very much self-driven. Recently, Deal and Camiré (2016) described Canadian university athletes' motives for contributing to off campus community, arguing that repeated exposure to contribution opportunities leads to the internalization of intrinsic motives for contributing, even if the initial exposure was obligatory (e.g., coach assigning the team to a volunteer activity). The current results suggest that the same may hold true for the acquisition of life skills. For instance, by affording athletes a leadership position on their team, athletes may be forced to act as leaders initially, but through continued experiences acting as a leader, athletes might internalize certain leadership qualities. Taken together, our findings provide additional evidence for the central role that athletes play in their own development, as they acquire life skills through trial and error. However, they suggest that head coaches can help athletes develop by placing them in, or indirectly affording, contexts where the opportunity to develop life skills exists. The role of the coach in athletes' development of life skills, because it is often indirect, appears less explicit in

the university context compared to the acknowledgement of coaches' roles in positive youth development.

Conclusion

Overall, the findings from this study offer an initial profile of the agents responsible for athletes' acquisition of life skills in university sport. These findings can help athletic directors and head coaches construct the necessary support system and program structure for fostering their student athletes' life skill development and for understanding how university student-athletes pursue their own development within this system. Overall, it appears that the head coach provides athletes with initial experiences that can help them transition into their roles as varsity student-athletes. In addition, when time permits, some head coaches directly assist athletes with their acquisition of life skills. However, because of the managerial nature of their roles, head coaches often delegate much of the responsibility of teaching athletes life skills to their support staff and other athletes on their team. Finally, at the university level, athletes are primarily responsibility for their own development as they seek different opportunities to regulate their own acquisition and development of life skills.

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Chapter Six

Article Five

Rathwell, S., & Young, B. W. (under review). Coaches' perspectives on personal and psychosocial development in university sport.

Abstract

Evidence suggests Canadian university sport programs can foster positive development (Deal & Camiré, 2016; Rathwell & Young, 2016). Further, university coaches have claimed to focus on their athletes' personal and psychosocial development (Kim, Bloom, & Bennie, 2016). Despite coaches' claims, little is known about university coaches' strategies for enhancing positive development. The aim of this study was to thoroughly understand how university coaches fostered athletes' positive development. Specifically, this study addressed two research questions: (a) Who was responsible for athletes' development? and (b) What is the role of the coach in athletes' development? Semi-structured open-ended interviews were conducted with 14 outstanding Canadian university coaches (9 male and 5 female). Interviews were analyzed using an inductive approach (Braun & Clarke, 2006). Coaches highlighted the conditions of university sport that foster positive development. In addition, the coaches described how they maximized athletes' development by establishing a support network, building team culture, and empowering athletes.

Keywords: Coaching; Positive Development; University Sport; Emerging Adulthood

Requests for researchers to focus on the positive development of people and to understand the developmental processes afforded through sport have provided an impetus for research on youth and adolescent athletes (Gould & Carson, 2008; Holt, 2016). A wealth of research exists on younger athletes' personal and psychosocial development within recreational (e.g., Falcão, Bloom, & Gilbert, 2012; Weiss, Stuntz, Bhalla, Bolter, & Price, 2013), high school (e.g., Hayden et al., 2015; Kendellen & Camiré, 2015), and elite (e.g., Strachan, Côté, & Deakin, 2011; Wilkes & Côté, 2010) sport settings. Emerging adulthood is a distinct developmental stage that spans from 18 to 25 years of age, and is characterized by increased independence, self-experimentation, and discovery as individuals try new roles in society and learn the consequences of their actions (Arnett, 2000). Although emerging adulthood (Arnett, 2000) is also a period of life where significant personal and psychosocial development occurs, the study of positive development within emerging adult athlete cohorts has received less empirical attention than younger populations (Rathwell & Young, 2016).

The existing research on the positive development of emerging adult athletes has been conducted within Canadian university sport contexts and has focused on contribution (Deal & Camiré, 2016a, 2016b) and experiences and outcomes related to sport participation (e.g., Rathwell & Young, 2016; Rathwell & Young, 2017). Deal and Camiré (2016a) examined Canadian university athletes' motivations to contribute to the wellbeing of themselves, others, and their communities, and discovered athletes had intrinsic and extrinsic motivations for their contributions. For example, volunteering allowed athletes to give back to the community while simultaneously building their curriculum vitae. Deal and Camiré (2016b) also questioned where athletes learned to contribute, finding that teammates, coaches, and members of the athletic department exposed athletes to opportunities to contribute to society. Further, athletes described

how other athletes helped them manage their time and supported their contributive efforts. One limitation to Deal and Camiré's (2016a, 2016b) research was that they relied entirely on the perspectives of athletes without considering how other agents (e.g., coaches and teammates) within the university sport context viewed athlete contribution.

Rathwell & Young (2016) surveyed the positive developmental outcomes and negative experiences associated with Canadian university sport. On average, athletes perceived they developed initiative, teamwork and social skills, interpersonal relationships, and connections to their communities through participation in university sport. Further, athletes judged that sport was minimally associated with social exclusion, negative peer interactions, and inappropriate adult behaviors. Another study by Rathwell and Young (2017) examined who was responsible for university athletes' positive development. They found that athletes believed they were the main contributors to their own development. However, athletes also identified how other athletes and coaches influenced their development. Of note, when athletes discussed their coaches' roles, they described direct and indirect influences on their development. For instance, coaches influenced athletes through the direct teaching of life skills (e.g., teaching goal setting), or indirectly by delegating the task of teaching life skills to their support staff, encouraging athlete attendance in university-offered programs, and placing athletes in leadership positions where they could learn important life skills. Although Rathwell and Young's (2016, 2017) studies offer valuable insights on university athletes' positive development, their conclusions are limited to university athletes' perspectives, and the views of teammates and coaches were not explored.

Although no studies to our knowledge have purposefully investigated university coaches' roles in fostering athletes' personal and psychosocial development (i.e., not physical, technical, or tactical development), a number of qualitative studies on Canadian university coaches suggest

they may have an integral role (Flett, Gould, Paule, & Schneider, 2010; Kim, Bloom, & Bennie, 2016; Rathwell, Bloom, & Loughead, 2014; Vallée & Bloom, 2005). Consistent amongst these studies is that coaches state they care about athletes' holistic development, coaches say they incorporate athletes' personal and psychosocial development within their mission statements, and coaches take some ownership over teaching athletes life skills. These findings corroborate athletes' accounts that suggest coaches are main contributors to their positive development (Rathwell & Young, 2017). However, the aforementioned coach studies are limited because most coaches simply acknowledged having a role in athletes' personal and psychosocial development without delving into detail on how they actually foster development. Further, coaches were often not asked who else they believed influenced athletes' development (i.e., athletes themselves, other athletes, support staff) nor whether certain conditions within the university sport environment were needed to foster development.

The purpose of this study, therefore, was to thoroughly understand coaches' perceptions on athletes' personal and psychosocial development through university sport. Specifically, we asked a) Who was responsible for athletes' development? and b) What is the role of the coach in athletes' development?

Method

Interpretive description methodology (ID) was used to guide this study because it centers on capturing themes and patterns within participants' subjective perceptions (Thorne, 2008; Thorne, Reimer Kirkham, & MacDonald-Emes, 1997). Consistent with ID, we approached this study with an interpretivist paradigm (Sparkes, 1992). Interpretivists assume that reality is individually constructed through the meanings attached to personal and social experiences. Interpretivist also believe that knowledge can be developed through a process of shared

interpretations, and that it is possible for commonalties to be found between individuals' perspectives.

Participants

Ethical approval from the host university was granted before participants were recruited. Prior to this study, 605 athletes (varsity or competitive club) completed an online survey where they reported quantitative data for their perceived positive developmental outcomes related to their experience in university sport (Authors, 2016). At the end of the survey, athletes were informed that in the near future we would be interviewing varsity coaches that were recognized as being individuals who invested considerable time, effort, and concern towards athletes' holistic development. Athletes were then asked if they would like to recommend coaches for our future study. Athletes were free to recommend more than one coach and could name coaches from teams other than their own. The athletes identified 315 coaches. The 20 most recommended coaches were contacted via email and asked to participate in the current study.

Of the 20 coaches who were contacted, 14 (nine male and five female) agreed to participate. The coaches averaged of 46.38 (SD = 8.23) years of age, had an average of 22.85 years (SD = 8.65) of coaching experience across their lifespans and averaged 11.50 years (SD = 8.53) with their current university team. The coaches were employed at 10 different universities across Canada, and coached six different types of sport: rugby (n = 4), cross-country/track and field (3), swimming (n = 2), soccer (n = 2), volleyball (n=2), and golf (n =1). Thirteen coaches worked for Usports sanctioned teams (i.e., varsity), and one worked on a competitive club team (i.e., athletes compete for their university but do not have varsity sanction). Of these coaches, one held a high school diploma, three held bachelor's degrees, six held master's degrees, and three had earned a Ph.D. Aside from one coach who was not certified by Canada's National

Coaching Certification Program, all of the participants held advanced national coaching certifications.

Data Gathering

Interview guide. Data were collected by the primary researcher using semi-structured open-ended interviews that lasted on average 67 minutes (*SD* = 19). All interviews were performed over Skype. The interview guide was piloted with a college level coach. The pilot interview was recorded and reviewed to ensure the interview questions a) were understood by the coach, and b) allowed the coach to elaborate on their various roles related to fostering athletes' positive development. No issues were found with the interview guide.

The interview guide consisted of six sections. The first section introduced the topic and initiated discussion (e.g., What does it mean to you when you hear the term varsity athlete? What does it mean to you when you hear the term varsity coach?). The second section addressed positive developmental experiences, which were informed by Hansen and Larson's (2005) six positive development categories, and included questions on themes related to identity, initiative, basic skills, adult networks and social capital, positive relationships, and teamwork and social skills. Themes derived from Hansen and Larson's (2005) positive developmental categories have been shown to be valid estimates of positive development within Canadian university sport contexts (Rathwell & Young, 2016). The questions were framed in colloquial terms. For example, to capture identity development, we asked: As a result of their participation in university sport, have your athletes been afforded experiences that allowed them get to know or to think about who they are as a person? If coaches answered yes, we would then probe: What did your athletes learn from these experiences? The third section questioned about the agents responsible for athletes' learning. Coaches were asked: Was what your athletes learned self-initiated, or did someone else play a role in their learning? These questions were purposefully

framed to allow coaches to take ownership for athletes' development or to assign responsibility to others. If the coaches did not initially take responsibility for athletes' development, we allowed them to discuss other agents before probing "As a coach, did you play a role in what they learned?" The final section contained concluding questions which gave coaches the opportunity to add information they believed was relevant or missing from their responses.

Data Analysis

Consistent with an interpretivist methodology (Sparkes, 1992), the goal of analyzing the open ended interviews was to create a hierarchy of emerging themes from unstructured data using an inductive thematic approach (Braun and Clarke, 2006). The main author began by transcribing each interview verbatim, making minor edits only to names of participants and locations to ensure the confidentiality of each participant. Transcribing the data allowed the main author to become immersed in the data and familiarized with its content. Each transcript was then analyzed line by line and broken down into codes, which were comprised of words, sentences, or entire paragraphs that conveyed the same idea and related to the same topic. Each code received a tag that was relevant to its content. Once tags were assigned to each code, they were examined for similarities and grouped together to form larger groups called sub-themes. Next, each sub-theme received a tag and were group together to form higher order themes based on their commonalities. All data were organized and stored using Nvivo7 software.

Trustworthiness

Member checking (Creswell & Miller, 2000) and investigator triangulation (Creswell, 2013) were used to improve the trustworthiness of the data. Member checking allows participants to correct any errors and to challenge the interpretations of the researcher ensuring that their views are not misrepresented. Member checks were performed at two time points (Creswell & Miller, 2000). First, all coaches were given the opportunity at the end of the

interview to add, modify, clarify, or exclude any comments made during the interview. Second, all coaches were sent a full verbatim transcript of their personal interview and given the opportunities to review and make changes to their personal transcripts. The coaches did not request any changes to their transcripts.

With respect to investigator triangulation (Creswell, 2013), following data analysis, the second author read through each of the transcripts. The second author was then provided with a coding sheet that outlined the identified themes, sub-themes, and codes, along with the respective definitions for each. The second author was tasked with re-reading four random transcripts with the coding sheet in hand and was asked to vet the analysis to ensure the data were accurately reflected by the themes, sub-themes, and codes, and the themes were both distinct and comprehensive in their representation of the data. Inconsistencies were discussed until consensus was achieved. Discussions resulted in only minor changes to the names and definitions of some themes (e.g., a theme originally labeled teammate regulation was renamed to social regulation).

Results

The coaches discussed the conditions surrounding being a student athletes that fostered development, as well as the strategies they used to facilitate their athletes' growth. Quotes from the coaches are provided below and are assigned using anonymous labels from C1 to C14. Although an attempt was made to represent quotes from all coaches, quotes from coaches who provided concrete examples of how they used strategies were given preference.

Conditions of University Sport

The coaches recognized that athletes were in an important transition period of life and noted that they were afforded many of the same developmental opportunities as non-athletes. For instance, the coaches described how their *athletes' transition to university life* and learning to live on their own forced them to learn:

> Often it is the first time these kids are cooking on their own, or doing house work. And now there is a greater appreciation for what mom and dad did. One of the first things they say is ‘wholly crap, I didn't realize what mom does for me’ and that piece is huge. So now they’re learning to live with roommates for the first time who may not agree with something their parents tolerated. Those are challenges they face, but it’s cool to see how they evolve over time and how they grow up and mature and do all those things. (C1)

Additionally, coaches believed that the demands of being a student athlete inherently facilitated development. Specific to sport, coaches felt that *being part of a team exposed athletes to others who were different from themselves*. Coaches described examples of athletes interacting with international students, people from different cultures, and people with different values and personalities. One coach offered an example of how having an international student on his team exposed his athletes to a new perspective on life:

> We have been lucky enough to have an international girl on our team from Ukraine. She comes from a city that is on absolute lockdown and her sister and mom are still there. So I think that gives our girls a bit of an eye when it comes to what a day in the life looks like for them, in contrasts to what we experience every day. (C3)

The coaches also believed sport was unique because it *exposed athletes to a variety of life experiences at an accelerated rate*. When discussing athletes’ experiences, coaches often emphasized the importance of challenges and failures:

> The things student athletes learn through are things that some people will never get to experience in life. I consider sport as life sped up. They learn to fail in a hurry, to comeback from challenges, to overcome barriers, and they learn all these things that many people don't because they are not put in those situations. Others don't ever have to

> do them, or it may take a lifetime for them to be put in some of these situations. So yes, they are making sacrifices when choosing to be a student athlete, but the return on their investment is greater than if they were just an athlete or just a student. (C14)

Finally, the coaches said the combination of being a student and an athlete was beneficial to athletes' development and felt the *pressure associated with balancing the high demands of school and sport* was a conduit for growth:

> Students athletes are put under pressure very early, but they tend to actually do better over time because they are put into a structure immediately, and they are put into an environment where they are expected to succeed. They are supported to succeed, but they are put under pressure immediately, and by doing that, they end up making greater strides and end up much more successful than their counterparts who don't play sports and who want to ease into university life. (C14)

Coach Strategies

Although the coaches believed sport had inherent conditions that facilitated personal growth, they noted athletes' development could be intentionally maximized by establishing a support network, building team culture, and empowering athletes.

Establishing a support network. The coaches were aware of the high demands on their student-athletes. Thus, they tried to provide athletes with as much support as possible. At the most basic level, the support system started with the coaches themselves. Coaches described having an *open door policy* so that athletes knew they cared and were available to help if needed:

> I think most of coaching is being a caring adult. You know, I am there for them every day. Especially in stressful times, this is an oasis for them. They love the fact that there is somebody there who has their best interest in mind in what they are trying to accomplish.

> I think that is the most important thing I do. So for the role of the coach, performance is really important, but the other side of it is being there for them. (C9)

The coaches noted the turbulent life stage athletes were in, and discussed how their athletes struggled to figure out who they were and what they wanted to be. In this vein, coaches often described playing the role of *counselor or life coach to athletes*:

> I am more than a coach. I'm a counselor, a guidance person, somebody who really understands athletes outside of being an athlete. I say that because of the situation that you are put in as a coach with the age of the athletes. It is a critical age for them. It is a big step because they are moving away from a lot of things being done for them to being more independent. And some of them are coming from homes where there may still be some control happening and they want to break away. So coaching varsity athletes is a little different because you have to kind of guide these kids through these things. (C13)

Although coaches supported their athletes, they did not have time to attend to all their needs. Thus, the coaches supplemented their support by *making athletes aware of and encouraging attendance at programs and services offered by their universities*:

> We have a program called PACE for younger athletes. Strong students are hired, and different faculties will have different nights. So if you are in business, you will attend a study session run by a senior athlete in business. Those are mandatory in first year and in their second year until they reach a 70% average. After that, they are optional, but they are still highly attended by my athletes. Even the kids who don't have to be there. I think it is important for them to use the resources available to them, and I think university students as a whole aren't aware of the services available to them. So trying to make them aware of resources on campus and trying to get them to use them is something I do. (C3)

In addition to utilizing university-offered programs, the coaches invested time and effort into finding and enlisting support staff to aid in their athletes' development. Commonly, *coaches looked within their universities and alumni networks to build their support staffs*, which included dieticians, sport psychologists, kinesiologists, academic advisors, tutors, and other specialists:

> We have a huge opportunity to integrate people from the athletics department within our team. The kinesiology student who wants to become a certified wellness coach has a great opportunity to be tied in to something and to see how it works within an athletic team under some supervision. So the students gets this experience, and can tie it to some practicum component of their degree. And we now have someone who helps the team and can supervise our athlete's workouts and make sure they are not risking injury. (C1)
>
> I have a nutritionist and a physiotherapist for our team. And I have a massage therapist who comes to all the practices and he sees them before and after training. He lets me know if they have a specific injury or an overuse injury or what not. So these are all people that were on my team before and they're just volunteering their time now. So there's actually a lot of things available to them now. (C11)

Perhaps the most important agents that coaches recruited to help with their athletes' development were the senior athletes on their teams. Many *coaches assigned senior athletes to act as mentors* to their rookies in order to provide them with timely guidance:

> I have a Big Sister program where a girl will come into the program and I will pair her up with an older senior girl who knows the ropes, and have mandatory big sister time every week. We do a similar thing with our weight training too. So, when these girls have time off, they are paired with a leader who also has that time off who is comfortable with the program. This helps the rookies adjust, but it also kind of gets the seniors to buy in a little

> bit more, because they feel like they have a little bit more responsibility. Because they know there are people there waiting on them and expecting them to help. (C3)

Building team culture. The coaches described that team culture influenced everything from the decisions they made to their athletes' developmental experiences. To build team culture, coaches started each season by *involving athletes in defining their teams' core values*. Although athletes were involved, the *coaches made sure to include their own values when defining culture*. In order to foster cultures that they believed were conducive to athletes' development, coaches made sure to include values that reflected acceptance, effort, accountability, and respect. One coach offered a step by step description of how he created team culture with his athletes each season:

> Every year, each player has to identify what they value. So they may value honesty, courage, or whatever. Next, we develop a list of shared values. So we may have a hundred different values, but we'll identify three to five that we all have in common. We then put our common values into a document that we call 'the standard'. And we have a saying here, I stole it from the Pittsburgh Steelers, and it's pretty simple: 'The Standard is The Standard'. So if we value accountability, it goes in our standard. Then, underneath it, we identify actions that will make sure that value is maintained. So we might say 'I will not make excuses, or I will be early.' Then, I add a few values that I call program values. These are the non-negotiables. They're values that, as a coach, I cannot compromise on. For example, I don't tolerate laziness, so work ethic is a program value because I can't coach you if you don't have it. So, even if a program value doesn't make our top 5, they have to follow it. So we put all our values in the Standard and we all sign it and we post it on the wall. So we get reminded of it all the time; it's in your face all the time. (C5)

Once the team culture was defined, the *coaches held everyone accountable to the agreed upon set of team rules* so that their athletes were forced to develop the skills and competencies required to uphold the team values:

> You can't make exceptions to your rules. I have left a player behind in the past because a player was late and didn't have a legitimate reason, and that player had to stay home for our away trip. I can tell you from then on they were all on time. (C6)

Coaches also held themselves accountable and described the importance of *modeling the behaviors they wanted to see from their athletes*:

> If we expect our players to arrive early and prepared for practices, we can't have coaches arriving five minutes before the start. If we talk to our players about the importance of eating healthy, we can't go and pick up McDonald's on the road and bring it on the bus and throw it in their face. We have to make sure that we live the way that we want them to. We have to be models for what we want them to be. (C4)

Another strategy coaches used to reinforce team culture was to foster pride in being a member of their programs by *reinforcing a shared identity with past, present, and future athletes*, which is both special and earned through upholding the program values. Coaches often accomplished this by referring to their teams as a "family" (C12) and by telling athletes they represented something bigger than themselves:

> So we try to instill that, even though they are individuals, they are a significant contributor to the overall program. It is important not only what they do on the field, but in the classroom, and in the community. They need to represent our program and our values which are maturity, respect for yourself and others, and a high work ethic. We work hard in the classroom, on the field, in the gym, and we work hard to make sure that

> people in our program feel that it is a special place to be. So I think that affects how they play, and how they behave in sport, the classroom, and the community. So our saying is once a (team name) always a (team name). That is something we value. (C14)

The coaches also reinforced team culture by *cultivating relationships between athletes and alumni*. The advantages of these relationships were multifaceted. First, these relationships provided athletes with examples of success stories based which were based on upholding the values of their programs. Second, coaches kept past athletes connected to their programs. Third, coaches built professional networks for their athletes. Altogether, building these relationships between athletes and alumni reinforced the idea of unity and pride in group membership, while also securing important financial support for their programs:

> We are planning a big reunion this fall for all former varsity cross country athletes. And you know, it is going to be all hands on deck for the team. We need everybody there to taxi and meet alumni. And this is partially to help elicit financial support from alumni, but it is also to create this bond and this feeling that we are all part of a single family that supports family going back decades. So yeah, we do this all the time and you know, it is not specifically about professional contacts for after school, but it definitely serves that role. So we try to bring our current team and alumni together all the time. (C2)

Finally, the coaches discussed how they maintained their team's culture through successive seasons in order to ensure that each year their athletes were exposed to the same conditions that encouraged development. Typically, the coaches did so by purposefully *recruiting athletes who shared their values* and then *using senior athletes to peer pressure rookies into adopting the existing culture*:

> I believe that culture and lifestyle really comes from the team. So when we recruit, the recruit will stay overnight in one of the team houses and experience that. And I get feedback from the team saying, 'this girl is awesome and is going to fit right in'. I want someone who in the future is going to foster my core values around the team. So they sort of know their limits and what my guidelines are. So it is like raising kids, you put these boundaries in place, but you put the right people in the right positions who respect those boundaries and then peer pressure kind of makes everything happen. (C13)

Empower athletes. The coaches wanted their athletes to take responsibility for their own development and the development of their teammates. However, before handing over the reins, the coaches said they needed to *teach athletes fundamental skills related to self and social regulation* so they would have the necessary tools to help themselves and others to develop in the absence of the coach. The skills that coaches mentioned most frequently were goal setting, planning and time management, emotional regulation, and communication. In order to build fundamental skills, coaches stressed how athletes needed practice. Coaches often described this process as "building habits" (C7), instead of teaching skills. Thus, the coaches *exposed athletes to scenarios where they needed to use their skills as frequently as possible*. One described how he got his athletes involved in community service to help improve their skills related to planning:

> Getting them to organize events helps quite a bit. So they get set up with a school, and the school will say 'next week I want you guys to help with the Terry Fox run. You guys are going plan the warmup and you are going to do this and that and that.' And now it is on my athletes to plan and organize it. How will they organize it for the kids and what will that look like? So I think that has helped them with their organizational skills. (C3)

Another coach described how she taught her athletes communication by forcing them to practice giving and receiving corrections during training sessions:

> It starts the first day when I take a veteran and rookie and make them correct each other. And I push the rookies. I'm like, 'you're not correcting her. Do her hands look right? You have to tell her.' And the rookie will say 'I don't want to tell her.' And I say 'I don't care, tell her.' Eventually the rookie finally says 'Can you put your head down a little lower?' and the veteran says 'Ok.' And then the rookie is like, 'Oh, she's listening to me.' So forcing them to step outside of their comfort zone. And they get used it, cause I'm like, 'You're not telling them! You're not being helpful unless you tell them!' It's a big trust thing; and now that they have gone through it, they really trust each other and are really willing to work for each other. So it becomes a non-issue very fast. (C8)

When athletes were exposed to learning situations, many *coaches believed it was important to allow athletes opportunities to fail and figure things out on their own:*

> They are not going to learn unless they make mistakes. You can come in and say these are the rules of the team and you have to follow them, but that won't work and that is not how I coach. I really believe they have to figure a lot of it out themselves, especially at this age. When they fail at something and figure it out themselves, and it is their decision to change, that is when learning happens the best. (C13).

Coaches noted how mistakes and failures provided teachable moments. One coach offered an example of how he exposed his athletes to a scenario that required them to practice emotional regulation, allowed them to fail, and then used their failure as a teachable moment:

> I've brought in a referee and told him to purposely make mistakes. Then I wait for players to lose their cool when a bad call is made. Then I'll say 'hey, hold on, are we exercising

> self-discipline right now? The answer's no, so let's rehearse it. Here's the bad call, how are you going to react?' And we'll actually rehearse how we want to react. So rather than yell at the referee, you're going to use that whistle as a call to action and you're going to get your team organized, you're going get our defensive shape the way we want it, you're going communicate with your teammates and you're basically on to the next job. (C5)

Although the coaches directly taught their athletes skills, they also wanted their athletes to develop on their own. Thus, to encourage athletes' self-directed attempts at regulation, coaches used *constant reminders to athletes that they were accountable for their own actions*:

> We constantly tell our athletes to be accountable for their actions. But at the same time, we tell them we are not the police and we are not trying to catch them misbehaving. But if they do misbehave, they are hurting themselves. They won't play as well the next day, and then they may end up on the bench. So the consequences are for them and the team. But it will mostly hurt them. So just educating them that they control their fate. (C6)

In addition to teaching athletes fundamental skills related to self and social regulation, the coaches used three overarching techniques to empower athletes and facilitate their development. The first overarching technique involved *explaining the purpose or reasoning behind requests*. By explaining the "why" behind requests, coaches enhanced athletes' development by making them aware of the value attached to what was being asked of them:

> I think if you explain to people why they are doing something you get a better buy in, and it is no different from any business leader. So in any of the books I have in my office here, everyone says the same thing. If you sell the vison and the purpose behind what you are asking people to do, people will then gain a greater sense of how their involvement is so critical to the vision and what role they have in improving things for the team. (C1)

The second overarching strategy involved *making athletes think through the use of questioning*. By posing challenging questions, the coaches expedited athletes' development by raising their opening their eyes to different perspectives:

> My main form of coaching is questioning. I try not to do it all for them. So I will ask 'what are you priorities? How do you feel? What is your end point? Do you need help?' So questioning and then saying 'Ok let's think about it'. So I will be like 'You have two hours here, what will you do with them? Oh you're napping, is that the best use of your time?' That kind of stuff, like asking them 'what about doing done meal prep instead?' It is the same on the field or when reviewing video. We try to ask questions that make them think. So it is not 'you saw the wrong thing', but 'what did you see?' And when they answer a question like that it's more of a challenge and they have to struggle. (C10)

Finally, the coaches empowered athletes by involving them in decision making, including actual coaching. In fact, many coaches stated their goal was to relinquish as much responsibility to athletes as possible:

> Ultimately, we want the team to lead the team. We want the team to be so empowered that it becomes the biggest influence on their behaviors and performance. That's the ultimate. To do that, you need to provide opportunities. And as a coach, even though it may make me uncomfortable, I have to learn to step back and hand the game to the players. So, when it comes to choosing plays in a game, I never make that decision. I want the players to have to work together and decide what play to run. (C5)

Discussion

Overall, the findings from this study offer one of the first accounts of university coaches' views and strategies regarding positive development in university sport. The current coaches

were recommended for this study by athletes across Canada as being individuals who invested considerable time, effort, and concern towards athletes' personal and psychosocial development.

Consistent with Arnett's (2000) conceptualization of emerging adulthood, our coaches believed that a significant portion of student athletes' development occurred naturally through a trial and error process as athletes transitioned to university life and experimented with new levels of independence. Novel to this study were the conditions that coaches described as being inherent to the role of student-athlete that were critical to their development. First, coaches felt sport forced athletes to interact with people who had different values, perspectives, and personalities than their own. Second, coaches believed that university sport exposed athletes to a greater variety of experiences at a faster rate than regular university students. Third, coaches held that the high expectations placed on athletes and the pressure of balancing sport and school accelerated athletes' development. Together, our results suggest that university sport programs may be well suited for fostering positive development in emerging adulthood because they may satisfy emerging adults' need for exploration (Arnett, 2000) by offering abundant opportunities to interact with others within a variety of scenarios.

Although the current coaches believed naturally occurring opportunities for development existed in their athletes' lives, they also felt they could actively maximize athletes' development. In the past, university coaches have stated taking active roles in their athletes' personal and psychosocial development (Flett et al., 2010; Rathwell et al., 2014; Vallée & Bloom, 2005), but few studies (c.f., Kim et al., 2016) have offered information on how coaches actually facilitated development. The current study offers one of the first accounts of the strategies that outstanding coaches used to try to foster positive development within their programs. The first strategy coaches discussed was creating a support network for their athletes. Consistent with Rathwell

and Young's (2017) findings from university athlete interviews, and Kim et al.'s (2016) results from coach interviews, our coaches described themselves, the support staff, and other athletes as the main supporters of athletes' positive development. The current results add to the existing literature by highlighting how coaches worked within their means to create support networks, which they used to indirectly support student-athletes' personal and psychosocial development. Specifically, coaches in this study a) looked within their university and alumni networks for specialists interested in volunteering on their teams, b) sought and encouraged university-offered programs designed to facilitate athletes' transition into university, and c) created mentorships between senior and rookie athletes.

The second strategy coaches discussed was creating a team culture that was conducive to athlete development. Cruickshank and Collins (2012) defined culture as "a dynamic process characterized by the shared values, beliefs, expectations and practices across the members and generations of a defined group" p. 340. Coaches in this study created cultures based on values related to acceptance, effort, accountability, and respect. The study of team culture has focused primarily on identifying the key components that enable enduring high performance, or the organizational strategies that affect culture change (for a review see; Maitland, Hills, & Rhind, 2015). Although positive development has not been the main focus of past research, many high performance programs described in the literature (Henriksen, Stambulova, & Roessler, 2010; Larsen, Alfermann, Henriksen, & Christensen, 2013) shared similar cultural characteristics to the ones found in our study. For instance, Larsen et al. (2013) studied an elite Danish soccer program and found their organizational culture emphasized a strong family feel, hard work, player education, and a holistic approach to athlete development. The current study adds to the literature by highlighting the strategies coaches used to build culture. Specifically, every year,

coaches included athletes in defining their team cultures, held athletes accountable to team rules, modeled behaviors that reflected the team culture, and attempted to foster close relationships across generations of players through a shared identity that recruits, athletes, and alumni could be proud of. Our results connect themes relating to organizational culture to positive development outcomes in university student-athletes, and set a precedence for research on how culture can be created to foster enduring positive development within sport organizations.

Finally, coaches used strategies to empower athletes into becoming active agents in their own development. Gould, Chung, Smith, and White (2006) found a common problem varsity high school coaches faced was their athletes' failure to take personal responsibility for actions. The current university coaches constantly reminded athletes they were in charge of their fate and taught athletes fundamental skills related to self (e.g., emotional regulation) and social (e.g., communication) regulation. In addition, the coaches fostered experiential learning by giving athletes increased responsibility and creating situations that required them to practice regulating. The coaches also stressed the benefits of challenging athletes and allowing them to fail. Our results align with positive growth through sport literature (Tamminen & Neely, 2016) that suggests adversity and challenges can lead to positive development within the right environment. For instance, Tamminen and Holt (2012) found adolescent athletes' ability to learn from adversity depended on whether it occurred in a supportive context or not. With respect to university athletes, our coaches discussed using athletes' mistakes or failures as teachable moments. It is possible that the coaches were able to capitalize on challenges and failures, and managed to optimize athlete development because of the caring and supportive environment they created.

Full Range Leadership Behaviours

Although we did not deductively analyze our data based on any existing leadership theory, it became apparent after our analysis that our coaches' strategies and behaviors shared many parallels with those found within the Full Range Leadership Model (FRLM; Avolio, 2011). The FRLM differentiates leadership behaviors amongst three distinct processes (transformational, transactional, and laissez faire leadership) which differ in degree of leader (e.g., coach) involvement and effectiveness.

Transformational leadership is considered the most involved and generally the most effective form of leadership (Avolio, 2011). Transformational leadership involves "inspiring followers to commit to a shared vision and goals for an organization or unit, challenging them to be innovative problem solvers, and developing followers' leadership capacity via coaching, mentoring, and provision of both challenge and support" (Bass & Riggio, 2006, p. 4). Sport literature also suggests that transformational coaching may be suited for encouraging positive development (Turnnidge, Evans, Vierimaa, Allan, & Côté, 2016). Accordingly, when asked about the strategies they used to promote positive development, our university coaches said they created cultures that inspired pride in group membership, challenged athletes to understand the reasons behind their actions, and developed athletes through coaching and mentorships from themselves, their support staff, and other athletes.

Transactional leadership is considered another effective and active leadership process within the FRLM (Avolio, 2011). Transactional leadership involves setting clear guidelines, indicating rewards for meeting task requirements, and intervening when followers fail to meet demands (Bass & Riggio, 2006). In our study, coaches involved athletes in defining team guidelines, and then held athletes accountable through rewards and sanctions. Thus, there was

evidence that university coaches viewed certain transactional strategies as important for promoting development as well.

Finally, laissez faire leadership is considered the least involved process and characterized by an absence of leadership (Avolio, 2011). In this study, there were less concrete examples of laissez faire leadership. However, many coaches believed in experiential learning and at times allowed their athletes to fail. This type of coaching strategy could be interpreted as laissez faire leadership, especially if one were to consider the perspective of the athletes. For example, a failing athlete might say "my coach isn't helping me". Alternatively, the coach in the same situation may say "I am purposefully not helping my athlete so that he/she will learn to seek out more readily available resources such as university-offered programs or senior athletes". The FRLM acknowledges that the three leadership processes are not mutually exclusive and optimal development occurs when leaders display laissez faire leadership rarely, transactional leadership moderately, and transformational leadership frequently (Avolio, 2011). Thus, it is possible that the coaches use laissez faire leadership to foster experiential learning and allow opportunities to learn through failures. However, coaches may simultaneously use transformational leadership to capitalize on athletes' failures by (a) ensuring they occur within a supportive environment, and (b) converting failures into teachable moments. Together, these results suggest that the complimentary processes of the FRLM may provide a fruitful model for understanding how coaches can optimize athlete development through their university sport programs.

Practical Implications

Our findings offer several implications for university coaches who are trying to build sport programs that foster athletes' holistic development. First, at the beginning of each season, coaches should establish the core values of their team with their athletes and define how athletes will remain accountable to them. Second, coaches should look within their universities and

alumni networks when developing athletes' support networks. Third, coaches should attempt to foster relationships between current athletes and alumni, since these relationships may benefit athlete "buy in", and portray models of previously successful student-athlete development to current athletes. Finally, coaches should attempt to empower athletes so that they learn to become more self-sufficient and can assist their coaches in the development of future athletes.

Limitations

Despite the practical information that emerged from our interviews with university coaches, several limitations need to be addresses. First, accounts in this study represent the views of coaches who were recommended by athletes across Canada for valuing and intentionally fostering positive development. Therefore, our results do not represent the average views of Canadian university coaches. Second, a large portion of our coaches coached female teams only, or teams such as swimming and cross-country/track where men and women train together. Thus, it is possible that the conditions and strategies outlined in this paper may be better suited for coaching female athletes or mixed teams than male athletes. Future research should investigate whether alternative strategies are needed to foster positive development when working with male teams. Finally, we recognize that our results may be specific to the Canadian university system where minimal revenue is generated from sport, and athletes' academic achievement is highly monitored and valued. Therefore, future studies are needed on coaches who run sport programs in countries such as the United States where team performance receives more precedence.

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Chapter Seven

General Discussion

The general purpose of this dissertation was to examine if and how coaches influenced their athletes' positive developmental outcomes and negative experiences within the context of university sport. Five research questions guided this dissertation: (a) Which reliable and valid positive developmental outcomes and negative experiences do athletes perceive to be attributed to their participation in university sport?' (b) How do university coaches and athletes describe athletes' positive developmental outcomes and negative experiences related to university sport? (c) Which coach leadership behaviours do athletes perceive when coaches are targeting their positive developmental outcomes and experiences related to university sport? (d) What are the correlational relationships between athletes' perceptions of coach leadership behaviours and their perceptions of positive developmental outcomes and negative experiences in university sport? and (e) How do university coaches and athletes describe coach leadership behaviours that target athletes' developmental outcomes and experiences related to university sport? Together, this five article mixed methods dissertation took systematic steps to address each of the research questions. Answers to each of the following questions are addressed throughout the forthcoming sections.

What is Positive Development in University Sport and How is It Measured?

At the onset of this dissertation, positive development was conceptualized through a life skill development lens. Life skills were defined as ''skills that enable individuals to succeed in the different environments in which they live, such as school, home and in their neighborhoods. Life skills can be behavioral (communicating effectively with peers and adults) or cognitive (making effective decisions); interpersonal (being assertive) or intrapersonal (setting goals)'' (Danish, Forneris, Hodge, & Heke, 2004, p. 40). Pierce, Gould, and Camié (2016) have since

broadened the definition of life skills to encompass "a range of personal assets, including psychological skills, knowledge, dispositions, and identity constructs or transformations", p.195.

The positive developmental outcomes discovered within this dissertation support Pierce and colleague's (2016) decision to broaden the definition of life skills in order to encompass assets that fall beyond the traditional definition of skills. For instance, coaches (article five) and athletes (article two) identified knowledge (e.g., social awareness) and identity transformations (e.g., experimenting within different roles) that had profound positive influences on athletes' lives that were not traditional skills. However, the current results intimate that even the newest definition of life skills (Pierce et al., 2016) does not capture all of the positive developmental outcomes in university sport. A worthy example that remains uncaptured is adult networks and social capital. By earning a spot on their university teams, the athletes inherited membership to an exclusive group of alumni who were willing to help them succeed in life. This exclusive membership occurred without necessarily having gained any new personal or psychosocial skills, knowledge, dispositions, or identity transformations. Taken together, the results from this dissertation suggest that life skills are only a component of a broader range of positive developmental outcomes that are needed to understand university athletes' positive development attributed to university sport.

Within the sport domain, life skill development has been predicated on athletes' ability to transfer skills learned in sport to other domains of life (Gould & Carson, 2008; Theokas, Danish, Hodge, Heke, & Forneris, 2008). The results from this dissertation only partially support the notion of transfer. For example, in article two, it was found that many skills learned in sport (e.g., time management and goal setting) were also being used by athletes in other realms of life. However, this was not true for all athletes, and some athletes directly stated that they did not use

skills learned in sport within external contexts. It is important to consider that despite failing to acknowledge the transfer of skills from sport to other domains, or even outright denying transfer, it is possible that athletes may have been unaware of transfer occurring. Recently, Pierce and colleagues (2016) proposed that transfer occurs both explicitly (i.e., purposefully) or implicitly (i.e., without knowledge of transfer). Thus, the current results should be interpreted as it related to the explicit transfer only, since the self-reported nature of our data does not allow for the evaluation of implicit transfer of life skills.

Other researchers have also called into question the validity of traditional transfer metaphors (Hager & Hodkinson, 2009; Pierce et al., 2016). For instance, Hager and Hodkinson noted that it is the learner who moves across situations and not the particular skills. Thus, they argue that as individuals move across contexts, they are not transferring skills, but rather entering a "transitional process of becoming" (p. 635) that is influenced by both contexts. The results from the articles in this dissertation show that sport is an important context for university aged athletes, as it affords them with rich opportunities to develop skills that may improve their transitional process of becoming functioning members of society. However, the five articles provided limited information about how athletes' sport experiences influence such transitional processes. Thus, the personal and psychosocial skills discussed in this dissertation, can only be confidently interpreted within the context of university sport. In other words, the articles in this dissertation provide insight into the personal and psychosocial skills athletes develop that are important for navigating the student athlete experience. However, whether these skills contribute to student athletes' personal success upon graduation can only be inferred at this time.

One of the major contributions of this dissertation is that it puts forth the first operational definitions of the positive developmental outcomes (i.e., initiative, basic skills, interpersonal

relationships, teamwork and social skills, adult networks and social capital) and negative experiences (stress, negative peer interactions, social exclusion, and inappropriate adult behavior) that can be reliably and validly measured within the context of university sport. In addition, through confirmatory factor analysis and exploratory structural equation modeling, the first valid and reliable scale for assessing the positive developmental outcomes and negative experiences in university sport was created using data from two pan-Canadian samples of university athletes. This scale was named the University Sport Experiences Scale (USES). There has been a history of measurement and validity issues in positive development through sport research (Sullivan et al., 2015), with MacDonald and McIsaac (2016) recently calling for more reliable and valid quantitative measures of positive development through sport. Thus, the advent of the USES in Article One provides a timely contribution to the field, at least for the self-report assessment of positive development through sport among 17-25 year-old university athletes.

Although the contributions of Article One were noteworthy, the resulting positive developmental outcomes and negative experiences were limited to the constraints attached to prior YES themes. Thus, it is possible that the measures found within the USES do not fully capture the nuanced experiences of university athletes. Article Two provides further insight into the depth and breadth of the USES, and can be used to support or conceptually extend the catalogue of developmental outcomes and experiences found within the USES. In Article Two, athletes illustrated many examples from their lived experiences that aligned with the USES scales for initiative, adult networks and social capital, teamwork and social skills, and stress. These results provide support for the operational definitions of these constructs within the university sport context.

In contrast, results from Article Two related to athletes' description of basic skills and interpersonal skills highlight areas where the USES may benefit from an expanded list of items. For instance, athletes' descriptions of basic skills focused mainly on emotional control, a construct that currently is absent from the USES. In addition, when the athletes spoke about the interpersonal relationships they formed through university sport, they commonly described meeting others who were similar to themselves. For example, athletes felt other athletes were the only ones who truly understood what they were going through. At present, the USES items for interpersonal relationships only measure athletes' relationships with others who are different from themselves. Thus, results from Article Two suggest that the scope of the USES may also benefit from the addition of new items designed to capture the relationships athletes form with likeminded others.

The results from Article Two also provide insight on constructs that were lost during the trimming process of Article One. In Article One, it was noted that the loss of the identity subscale was concerning because of the relevance of identity to emerging adulthood (Arnett, 2006). It was put forth that the YES 2.0 items may have been too simple to fully capture notions of identity present in emerging adulthood, or that being both a student and an athlete influenced identity development in ways that were not effectively captured by YES 2.0 items. The YES items that questioned about identity focused on experimenting with new ways of acting, attempting new thing, having a positive outlook about the future, and learning about one's self (Hansen & Larsen, 2005). Consistent with the items found in the identity subscales, athletes in Article Two described how their athletics, academics, and experiences outside of university allowed them to experiment with various social roles and learn about who they were.

Outside of the scope of the YES items on identity, there were themes surrounding affiliation and institutional values. Specifically, in Article two, the athletes acknowledged that they were identifiable members of their university, and thus, were aware that their personal behaviors could influence public perception of their teams and universities. Accordingly, the athletes discussed monitoring their behaviors and acted in ways that were congruent with the values of their teams and universities. Thus, the results from Article Two suggest that future subscales related to identity may need to incorporate elements related to representing their sport program, and adopting team and university values if they wish to accurately capture how identity is formed in the university sport context. In sum, results from Article One operationalized positive development for this dissertation, and provided a reliable and valid measurement tool (i.e., the USES). Results from Article Two provided contextual information related to themes found within the USES, and an initial examination of the depth and breadth of its items and constructs.

How Do Coaches' Full Range Leadership Behaviours Influence Athletes' Positive Development in University Sport?

Results from this dissertation have both theoretical and practical implications related to coaches' leadership behaviours in university sport as defined by the Full Range Leadership Model (FRLM; Avolio, 2011). First, the results from Article Three suggest that the current hypothesized factor structure of the MLQ-5X (Avolio & Bass, 2004) may not be a valid measure of university coaching behaviours. These results are supported by research inside and outside of sport where researchers have been challenged to fit data soundly to the proposed FRLM measurement model (e.g., Price & Weiss, 2013; Tejeda, Scandura, & Pillai, 2001; Yukl, 1999). In Article Three, the results offered a three factor solution with good psychometric properties,

which may encourage replication in similar future research. Pragmatically, the three factor solution may save future researchers time and effort should they fail to confirm Avolio and Bass' (2004) nine factor solution.

From a theoretical standpoint, results from Article Three call into question the distinction of transformational behaviours. Based on analytics, the data from Article Three suggest that the 4 I's of transformational leadership might be a one unidimensional construct. Yukl (1999) also noted there appears to be a lack of theoretical distinction amongst many of the 4 I's. A clear example is seen when comparing the definitions of idealized influence and inspirational motivation. Idealized influence is defined as behaviours that instill pride, respect, and trust, and that encourage a strong sense of collective purpose (Avolio & Bass, 2004). Meanwhile, inspirational motivation involves setting high performance expectations and communicating an inspiring vision (Avolio and Bass, 2004). Given the conceptual overlap between the leader's vision and followers' collective sense of purpose, it is not surprising that the results from Article Three showed multicollinearity amongst these constructs.

Although athletes had problems differentiating amongst the 4 I's when they were asked to consider the MLQ-5X items in reference to their university coaches' behaviours, the results from Article Three suggest that aspects of the FRLM remain pertinent for examining associations between university student-athletes' judgments of their coach's leadership behaviours and their corresponding reports of positive developmental outcomes and negative experiences. This was evidenced by the meaningful amount of variance explained in the dependent variables at both the individual and team level when coaches' leadership behaviours were conceptualized as transformational, corrective, and passive/avoidant leadership. For example, 21% of the perceived inappropriate or misplaced behaviors, interactions, or

expectations from sport leaders (i.e., inappropriate adult behavior) were explained at the individual level by athletes' perceptions of their coaches' transformational, corrective, and passive/avoidant leadership behaviours. Moreover, 90% of the variance across teams on inappropriate adult behaviour was explained by coaches' team level transformational, corrective, and passive/avoidant leadership behaviours. Thus, despite some measurement issues, the MLQ-5X (Avolio & Bass, 2004) remained an effective tool for explaining athletes' positive developmental outcomes and negative experiences in university sport.

When examining the cross sectional relationships between coaches' FRLM behaviours and athletes' positive developmental outcomes and negatives experiences in university sport, both confirmatory and novel results were found. In line with our hypotheses, and with previous research in youth sport (Vella et al., 2013), transformational leadership behaviours were consistently related with positive developmental outcomes and inversely related to negative experiences. Novel to Article Three, were the positive relationships found between passive/avoidant leadership styles and athletes' positive developmental outcomes. Fortunately, Article Four and Five allowed for further investigation into paradoxical benefits of passive/avoidant leadership. For example, athletes in Article Four described that most of their development occurred through trial and error, as they were exposed to new scenarios and were expected to learn from their mistakes. When considering the perspective of athletes alone, the coaches' passive/avoidant behaviours may be perceived as neglectful, which in turn, might explain the significant correlations found in Article Three between perceived passive/avoidant coaching behaviours and athletes' experiences of stress and negative leadership. However, when considering that coaches in Article Five described that they were deliberately absent at times in order to foster self-directed learning on the part of their athletes, it is not surprising to see that

when athletes perceived passive/avoidant coaching behaviours, they also perceived stronger interpersonal relationships with teammates, greater skills related to finding information, and higher team levels of initiative in Article Three. Taken together, the data from athletes' and coaches' testimonies suggest that deliberate withholding of coaching behaviours may improve athletes' positive development by maximizing their exposure to developmental experiences and allowing them to use self-directed approaches when solving problems, if they are done in a deliberate attempt to foster development. However, the positive developmental outcomes associated with passive/avoidant coaching may come at the cost of inflating athletes' perceived negative experiences.

In addition to providing insights on the behaviours found within the FRLM (Avolio, 2011), Article Four and Five highlight potential coaching behaviours and strategies that fall outside of the FRLM (Avolio, 2011). Although no single theory is expected to capture all leadership behaviour, the use of the label "full range leadership model" invites criticism on its completeness. Results from Article Five highlight other important behaviours and strategies such as building a support network for athletes, fostering athlete-alumni relationships, and securing funding, that appear important to coaching, but are not currently represented within the FRLM. Coaches in Article Five also described using laissez faire like behaviours, however, they were purposefully executed in order to empower their athletes. At this time, laissez faire leadership is conceptualized as a negative form of leadership, and as a result, all items of the MLQ-5X related to laissez faire leadership are written in a negative tone. The results from Article Five suggest that positive laissez faire leadership may be a construct missing from the FRLM.

What differentiates the positive laissez faire leadership behaviours found in Article Five from more traditional definitions of passive and avoidant leadership behaviours (Avolio, 2011),

is the intentionally and involvement behind coaching strategies. For instance, going by Avolio's (2011) conceptualization of passive and avoidant behaviours (i.e., laissez faire leadership), one would assume that coaches who use passive or avoidant behaviours are unaware of their athletes' development or simply don't care about it. In stark contrast, the coaches in Article Five were highly aware of their athletes' personal and psychosocial development and deliberate in their withholding of leadership to foster such development. Specifically, the coaches worked behind the scenes to set up support systems so that when athletes failed, they wouldn't fail too hard, and created opportunities for athletes to learn through trial and error. Thus, despite the fact that coaches' behaviours may not have been perceived by athletes (see results from Article Four), their deliberate creation of support systems, and their purposeful allowing for experiential learning still required high involved coaching strategies.

What Is the Utility of Petitpas' (2005) Framework for Assessing Positive Development in University Sport?

No conceptual framework exists for understanding positive development in the context of university sport. Therefore, we elected to frame our study using notions borrowed from an established framework found within the youth sport literature (Petitpas et al., 2005). The results from the five articles in this dissertation provide the first insights into the utility of Petitpas and colleague's (2005) framework for understanding positive development in university sport.

Context. According to Petitpas and colleagues (2005), the environment in which sport takes place will determine the likelihood of positive development occurring. They claim that the sporting environment needs to a) be intrinsically motivating, challenging, and important enough to warrant the expenditure of considerable time over time, b) offer participants a valued role within an important group, and c) have clear rules, goals, and incentives.

The qualitative results from Articles Two, Four, and Five collectively suggest that university sport programs meet all of the abovementioned requisites for fostering development. For instance, athletes in Article Four and coaches in Article Five stated that balancing academics and athletics was extremely demanding and required substantial effort from athletes. Moreover, the importance of group membership was emphasized by athletes' statements in Article Two. They noted the close and intimate nature of the interpersonal relationships formed with other athletes, as well as the idea that they represented something greater than themselves (i.e., university and team). These statements were mirrored by coaches' comments in Article Five. Coaches described their deliberate attempts at fostering pride and respect in group membership. Finally, results from Article Five suggest that clear rules, goals, and incentives are coactively constructed by the coaches with athletes at the beginning of every sport season. Together, the results support Petitpas and colleague's (2005) contextual criteria, and suggest that university sport programs offer appropriate environments for facilitating positive development. One notable omission from Petitpas et al.'s (2005) framework is a clear description of how university coaches create environments that foster positive development. Article Five addressed this gap in their framework, and suggests that coaches need to include their athletes in defining their team cultures, hold athletes accountable to team rules, model behaviours that reflect the team culture, and foster close relationships across generations of players through a shared identity that inspires pride.

External Assets. Petitpas et al. (2005) claim that positive development requires a caring community of external supports. Results from Article Four and Five are the first to our knowledge to identify the important external assets that facilitate university athletes' personal and psychosocial development. Specifically, coaches, the support staff, other athletes, and

alumni were recognised as those who support university athletes' personal and psychosocial development. Further, Article Five provided practical information on how coaches can develop caring communities of external supports by (a) looking within their university and alumni networks for specialists interested in volunteering on their teams, b) seeking out and encouraging university-offered programs designed to facilitate athletes' transition into university, and c) creating mentorships between senior and rookie athletes.

Within Petitpas and colleagues' (2005) framework, there is a strong emphasis on adult mentors and parental support. Consistent with Petitpas et al.'s (2005) claims, mentorships were incredibly important to university athletes' development in Article Four. However, the mentorships described by athletes were typically not from adults. Instead, athletes claimed that other athletes were the external agents who had the greatest influence on their development. In Article Five, coaches also recognized the importance of teammates and expressed how they deliberately paired incoming athletes with veterans so their athletes could receive important mentorship on a day to day basis. Together, these results suggest that caring peers might have a more proximal role than caring adults when fostering personal and psychosocial developmental outcomes within the context of university sport, while adults may be responsible for facilitating peer to peer interactions and mentorships. Petitpas et al.'s (2005) also emphasize the importance of parental support within their framework. Of interest, Article Four suggest that the actual role of parents is significantly diminished within the context of university sport. However, our findings from Article Five suggest that "parental figures" are still important for athletes' personal and psychosocial development. The only difference being that within the context of university sport, coaches may replace parents as the central "parental figure" in athletes' lives.

Although the results generally suggest that external assets (i.e., coaches, other athletes, support staff, and alumni) help athletes develop, their role appears to be different within the university sport context than within youth and adolescent sport (e.g., Holt, 2016). This is evidenced by university athletes' claims in Article Four that they had the greatest influence on their own daily development, and that most of their development occurred through personal exploration and trial and error. There are likely two contributing factors to the reduced role of external assets in university sport. First, athletes may be experiencing changing developmental wants and needs associated with emerging adulthood (Arnett, 2000). Emerging adulthood is a developmental stage that is characterized by an increase in independence from others and a need to discover the consequences of ones' own actions (Arnett, 2006). Thus, it not surprising that athletes might be pulling away from adult driven support. Second, coaches may be intentionally reducing their own significance in athletes' development in order to promote self-directed learning. For instance, coaches in Article Five purposefully withheld their assistance and allowed their athletes to fail on many occasions in order to empower athletes and foster experiential learning. Therefore, the results from Article Five suggest that coaches may take a less hands on approach to fostering development, as they shift their efforts to creating relationships and developmental experiences that foster positive development instead.

It is important to note, that it is also possible that the nature of our probing afforded a less biased description of external assets. For instance, in creating the semi-structured interview guide for the athletes, we made a point to sequence our probes to give athletes the option to take responsibility for, or attribute their development to anyone, adult or not, before we finally explicitly probed them about their coach. Likewise, for the coach interview guide, the probes were deliberately structured to give coaches the option to take responsibility for, or attribute their

athletes' development to anyone, adult or not, before we finally explicitly probed them about their role. Thus, by creating our interview guides in such a way, athletes and coaches may have felt less compelled to attribute athletes' development to coaches and other adults. Unfortunately, it is difficult to compare our interview guide with those used in previous positive development in sport publications because the nature and sequence of qualitative interview probes are rarely discussed. Thus, we cannot know whether in previous research athletes and coaches were given the same opportunity to discuss notions of self-agency or peer mentorships before being probed about adults. Nonetheless, our results suggest a potential for biased results in previous research, and set a precedence for more disclosure in qualitative research regarding the nature of the probes in the interview guide.

Internal Assets. Unfortunately, Petitpas and colleagues (2005) do not provide a clear operational definition of internal assets. Instead, they focus their lengthy description on certain life skills (i.e. social, planning, and problem-solving competencies), as well as the development of identity. The results from this dissertation consider the statements of coaches and athletes and highlight the potential internal assets found within university sport programs. In Article One, five broad positive developmental outcomes associated with university sport were identified (i.e., initiative, basic skills, interpersonal relationships, teamwork and social skills, adult networks and social capital). In Article Two, results from qualitative interview with athletes provided two more positive developmental outcomes (i.e., identity and emotional regulation). Finally, in Article Five, coaches weighed in on the matter, and identified that the most important skills to develop were goal setting, planning and time management, emotional regulation, and communication. When combining the results of these three studies, an exhaustive list of specific positive developmental outcomes is put forth to define the internal assets found within the

context of university sport. This list includes skills and outcomes related to goal-setting, effort, planning, identity exploration, discipline, creativity, emotional regulation, information seeking, cooperation, communication, leadership, interpersonal relationships, and off-campus social networks. However, it is important to consider that the only internal assets that can be validly and reliably assessed within the context of university sport are those that are defined by the construct found within the USES. Therefore, it is recommended that the positive developmental outcomes of the USES serve as the starting point for investigating internal assets within the university sport context.

According to Petitpas and colleagues (2005), internal assets need to be specifically targeted in order for them to develop. Overall, our results partially support this claim. For instance, coaches in Article Five, who were recommended for developing personal and psychosocial outcomes, all said they purposefully worked with their athletes on developing their internal assets, which suggests that intentionally targeting the development of internal assets is beneficial to athletes. On the other hand, the same coaches noted that much of their athletes' personal and psychosocial development occurred naturally through an athlete-regulated trial and error process. These results were confirmed by athletes' in Article Four. In addition, many of the athletes interviewed, who had been pre-screened to ensure they were experiencing high levels of positive development through sport, claimed their coaches did not work directly with them on developing their internal assets. Thus, findings from Article Two suggest that the development of internal assets can occur without being deliberately targeted. When considering the two articles together, it is important to recognize that athletes in Article Four, and coaches in Article Five, both described caring and supportive environments. Thus, our findings suggest that athletes' development can be maximized when the development of internal assets is deliberately targeted,

however more absent or passive strategies may also be effective if coupled with a caring and supportive environment.

Practical Implications

The findings from the five articles in this dissertation can be used by sport practitioners and applied within the context of university sport. Article One offers coaches and athletic directors a list of relevant positive developmental outcomes and negative experience associated with university sport. With this list, targeted interventions can be planned that promote positive development and optimize the student-athlete experience. In addition, Article One offers the USES, a reliable and valid measure of positive development that coaches and athletic directors can use to monitor their athletes' development over their tenure as student-athletes.

Article Two provides contextual information on what positive developmental outcomes look like in the context of university sport. Further, Article Two suggests that the competencies and skills that athletes learn and apply in sport do not necessarily transfer to other areas of life. Coaches should consider these results when teaching athletes personal and psychosocial skills within the context of sport. If coaches want the skills acquired in sport to transfer to athletes' academic lives and personal lives, they may need to invest additional time and effort into explaining how the skills apply in different settings (Holt, 2016). These results are also important to athletic directors. They suggest that additional programming should be offered to athletes that focuses on teaching skills that apply beyond sport. For instance, courses on goal setting and time management should incorporate strategies for the off-season and have dedicated workshops related to academic outcome and future professional application following graduation.

Article Three can be used to inform coaching approaches that target positive development. Specifically, the results suggest that university coaches can foster positive development by manifesting the four I's of transformational leadership and the use of contingent

reward. Thus, coaches should (a) form a vision of a desirable future, articulate how the vision can be accomplished, and set high performance standards in order to achieve their vision (inspirational motivation), (b) stimulate athletes to be creative and resourceful by challenging them to rethink their old ways (intellectual stimulation), (c) foster personal growth in their athletes while considering each athletes' individual needs (individual consideration), (d) develop trust and respect by modeling the behaviors and values needed to accomplish their vision (idealized influence), and (e) provide reinforcement for desired outcomes (contingent reward). These behaviours are collectively associated with numerous positive outcomes reported by Canadian university student-athletes.

Article Four was the first of its kind to investigate the agents responsible for university athletes' positive development in university sport. Findings can help coaches construct support systems for fostering positive development. In addition, these results can provide first year athletes, or struggling athletes, with important information on where they can seek out support to optimize their personal and psychosocial development.

Results from Article Five are pertinent for coaches, athletes, and athletic directors. For coaches, they offer a guide for building sport programs that foster positive development. For athletic directors, they offer evaluative criteria for judging their many sport programs capabilities to foster development. For instance, athletic directors could check (a) whether the core values of their teams are defined and whether it is clear how athletes will remain accountable to them, (b) if individuals from within their universities and various alumni networks are being integrated within athletes' support networks, and (c) if relationships between current athletes and alumni are being formed. These results are also useful to recruits who are choosing which university to attend. Recruits should consider whether the characteristics described in Article Five are present

within the university sport programs they are considering. Thus, recruits are encouraged to ask current athletes and coaches about the support systems in place to ensure that they benefiting on and off the field.

Limitations and Future Directions

Although the articles in this dissertation make both theoretical and practical contributions, it is important to address some of their limitations. First, the USES resulting from Article One only assesses the YES based themes that could be reliably and validly measured within the context of university sport. As a consequence, the results presented in Article One and Article Three (where USES outcomes were linked to a leader's behaviours) may not reflect all of the pertinent positive developmental outcomes and negative experiences within university sport. Future research should explore what needs to be added to the USES to reach a complete catalogue of outcomes and experiences. Our results from Article Two suggest that identity and emotional regulation might be relevant additions to the scale, however, future research is needed to test whether these constructs can be successfully modeled alongside the existing USES constructs.

Second, Articles Two and Four are based on the views of student-athletes' who had reported exceptionally positive experiences. Likewise, the results from Article five were drawn from the perspectives of coaches who were recommended for focusing on positive development. Together, the qualitative articles in this dissertation likely only provide insight on the elements of outstanding Canadian university sport programs that already foster positive development. What they do not provide, is information on what elements are found within sport programs that hinder athletes' personal and psychosocial development, nor do they provide information on strategies for overcoming barriers to positive development. Therefore, identifying the barriers to personal

and psychosocial development, as well as strategies for overcoming them is a valuable line inquiry for future researchers.

Third, due to the substantial sample sizes needed to complete the quantitative analyses in Article One and Four, cross-sectional designs were used and all measures were self-reported (i.e., online survey). Although this type of design ensured that the required sample sizes were met, it increased the likelihood of common method bias (Podsakoff, MacKenzie, & Jeong-Yeon, 2003). Common method bias refers to the variance attributed to measurement method, rather than to the intended constructs. This type of systematic error can influence construct reliability and validity (Article One), as well as parameter estimates of the correlational relationships between constructs (Article Three). There are several statistical remedies for controlling for common method bias, one of which involves creating a common latent factor that loads onto every item used in the study. However, there is debate about the effectiveness of this statistical procedure (Podsakoff et al., 2003). Further, the addition of common latent factors can cause convergence issues when performing advanced statistical analyses procedures such as those performed in Article One. One avenue for future research might be to explore the different statistical measures for controlling for common method bias, and to assess how the degree of bias influences relationships between MLQ-5X constructs and USES outcomes

Procedural remedies such as collecting data from different sources, or using secondary data also exist for controlling common method bias. Thus one avenue for future research would be to collect coaches' perceptions of their own leadership behaviours alongside athletes' perceptions of their own positive developmental outcomes and negative experiences associated with university sport. Although these procedures diminish the likelihood of common method

bias, they are not appropriate when the study requires the predictor and criterion variables to capture individuals' perceptions on both constructs, such as the case in Study Four.

Perhaps the most effective way that common method bias could be controlled for in future studies is to apply a longitudinal design. For instance, athletes could be asked to rate their coach at the beginning of the season and then provide their perceptions of positive developmental outcomes and negatives experiences at multiple time points throughout their season. In addition to negating the effect of common method, a longitudinal design would also allow for predictive relationships to be uncovered. As such, studies implementing longitudinal designs are a necessary next step in assessing university athletes' positive development.

The use of cross-sectional and self-reported data also does not allow for the exploration of how athletes develop over time. However, the combined results from Article Two and Four indicate that athlete development needs to be understood as a developmental process whereby the greatest evidence of development appears in the later years of eligibility. For example, it was the fifth year athletes who were the ones who had the most sophisticated understanding of life skill transfer in Article Two, as well as the greatest awareness of coaches' indirect influences in Article Four. Thus, the study of athletes' developmental evolution across their five years of eligibility is a ripe area for future research.

Fourth, across all five articles there was an underrepresentation of traditional hyper-masculinized sports such as men's' football, wrestling, and hockey. The underrepresentation of these male athletes might be explained by an inherent unwillingness to participate in research. Alternatively, it is also possible that coaches from traditional hyper-masculinized male sports may value personal and psychosocial development less than other coaches. For instance, all eligible coaches across Canada were asked to circulate our survey link to their athletes. For the

majority of men's football, hockey, and wrestling teams, no athletes responded to our link, which suggests that the coaches of these team may have elected not to circulate the link. Although, no data on these coaches, it might be inferred from their unwillingness to circulate the online link to their athletes, that personal and psychosocial development was not a priority for them. Future research is needed before these speculations can be support.

Fifth, due to the sequential nature of the studies in this dissertation, athletes' (Article Four) and coaches' perceptions (Article Five) regarding coaches' roles in their personal and psychosocial development were analyzed independently. Had the data from both sources been analyzed together within one article, their perspectives could have been triangulated to delve deeper into the complex interactions between their perceptions. For instance, in Article four, a hockey athlete described how occupying a leadership position afforded her the opportunity to practice taking charge of groups:

> When I was a rookie or a second year player, I didn't think I was in a position to say anything. But then, in third year, I was given a fitness captain role. That really helped me take on more leadership. So I really focused on my warm ups and cool downs and making sure that the other girls were doing what they needed to. That kind of was a first step in my leadership development. I was able to learn from how others responded to me in that role. After that I got a letter [captaincy] and that gave me even more responsibilities and opportunities to work on my leadership. (A2; Hockey)

This quote was interpreted as a self-directed learning opportunity as the athlete learned through trial and error. However, in Article Five, many coaches described assigning mentorship positions to athletes. Thus, from the perspective of the coach, this opportunity might be interpreted as coach-directed. Although the articles remain separate, efforts have been made in the general

discussed to account for the varying perspectives. With this said, analyzing the data separately, and then interpreting the findings from Article Four and Article Five within the general discussion, allowed for a richer understanding of the various support agents within the university sport setting. For example, data from athletes in Article Four were explored in depth regarding the influence of the support staff, family members, other athletes, and the head coach. Further, by focusing on athletes' and coaches' perspectives separately in Article Four and Five, it was possible to tease apart some of the limitations of laissez faire leadership as defined by the FRLM (Avolio, 2011). Specifically, it was uncovered that athletes' believed they were more self-directed than coaches did, and noted benefitting at times from this perceived absence of coaching. However, coaches' in Article Five said that much of their influence happened behind the scenes, as they orchestrated opportunities and affordances for self-directed learning and created safe and supportive environments. Together, analyzing the two perspectives separately and in-depth across two articles, highlights the importance of giving each agent a voice before making claims regarding the individual roles of agents regarding athletes' development.

Finally, a variable-centered approach to assessing FRLM behaviours was adopted in Article Three, which focused on the separate effects of each leadership dimension without considering their interactions. Although such an approach has been applied previously (e.g., References), it does not fully align with the conceptual framework of the FRLM (Avolio, 2011), as the three leadership dimensions are not independent, and the greatest leaders are assumed to use all three leadership styles at the same time, just in different frequencies. It is possible that measuring FRLM in a way that is more consistent with theory (Avolio, 2011) might provide a more nuanced estimation of effects of coaching. Thus, there may be much to gain through future research that assesses different FRLM coaching profiles (i.e., configurations of transformational,

with transactional/corrective, and passive/avoidant; e.g., O'Shea, Foti, Hauenstein, & Bycio, 2009) found within university sport, and how each profile affects athletes' development.

Conclusion

When sport environments are constructed in the right way, they have the power to facilitate positive development (Holt, 2016). To date, the majority of positive development through sport research has focused on adolescent or youth populations. Emerging adulthood is another developmental period of life that is characterized by significant personal and psychosocial development (Arnett, 2000), yet almost no studies (c.f., Deal & Camiré, 2016a, 2016b) outside of this dissertation have investigated how sport programs can facilitate emerging adult athletes' positive development. This dissertation contributes to the scientific positive development through sport literature by increasing our understanding of how university sport programs can be framed as a context that facilitates the personal and psychosocial development of student-athletes. Article One provided operational definitions of the positive developmental outcomes and negative experiences that would be assessed in this dissertation. Further, Article One offered a tool that could reliably and validly assess these outcomes and experiences, and resulting descriptive data showed initial evidence of positive development occurring through university sport participation. Article Two provided context to the different positive development outcomes resulting from university sport involvement, as well as qualitative support for the use of YES based themes. Article Three examined the cross sectional relationships between FRLM coaching behaviours and athletes' positive development outcomes and negative experiences in university sport. The results from Article Three confirmed the utility of transformational approaches, but suggested that university sport may be a unique environment where laissez faire (or passive/avoidant) type coaching can foster positive development. Article Four outlined the

various agents responsible for university athletes' positive development, highlighted the roles and responsibilities of these agents, and provided novel insight into the unprecedented agency that university athletes have over their own development. Finally, Article Five showcased how outstanding Canadian university coaches established their sport programs in ways that fostered athletes' personal and psychosocial development. Together, the five articles make novel theoretical and practical knowledge contributions to the field of positive development through sport, and set a precedence for positive development research in university sport, as well as other emerging adult sport contexts.

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Appendix A

Ethics Approval Notice

Health Sciences and Science REB

Principal Investigator / Supervisor / Co-investigator(s) / Student(s)

First Name	Last Name	Affiliation	Role
Bradley	Young	Health Sciences / Human Kinetics	Supervisor
Scott	Rathwell	Health Sciences / Human Kinetics	Student Researcher

File Number: h04-14-06

Type of Project: PhD Thesis

Title: Exploring the Relationship Between Coaches' Leadership Behaviours and Athletes' Life Skill Development Experiences in Canadian University, College, and CEGEP Sport.

Approval Date (mm/dd/yyyy)	Expiry Date (mm/dd/yyyy)	Approval Type
05/07/2014	05/06/2015	Ia (partial)

(Ia: Approval, Ib: Approval for initial stage only)

Special Conditions / Comments:

Some institutions require researchers to obtain REB approval from their institutions in order to access their students. Copies of these permissions/approvals (or a written confirmation if an ethics review is not required) must be submitted to the Ethics Office before any research activity can take place. Partial ethics approval may be granted individually for each research site (institution), so that recruitment and data collection may start within the respective site (for which permission has been submitted). Once all permissions have been received, full approval may be granted.

550, rue Cumberland, pièce 154 550 Cumberland Street, room 154
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613-562-5387 • Téléc./Fax 613-562-5338
http://www.research.uottawa.ca/ethics/index.html
http://www.recherche.uottawa.ca/deontologie/index.html

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This is to confirm that the University of Ottawa Research Ethics Board identified above, which operates in accordance with the Tri-Council Policy Statement and other applicable laws and regulations in Ontario, has examined and approved the application for ethical approval for the above named research project as of the Ethics Approval Date indicated for the period above and subject to the conditions listed the section above entitled "Special Conditions / Comments".

During the course of the study the protocol may not be modified without prior written approval from the REB except when necessary to remove participants from immediate endangerment or when the modification(s) pertain to only administrative or logistical components of the study (e.g. change of telephone number). Investigators must also promptly alert the REB of any changes which increase the risk to participant(s), any changes which considerably affect the conduct of the project, all unanticipated and harmful events that occur, and new information that may negatively affect the conduct of the project and safety of the participant(s). Modifications to the project, information/consent documentation, and/or recruitment documentation, should be submitted to this office for approval using the "Modification to research project" form available at: http://www.research.uottawa.ca/ethics/forms.html.

Please submit an annual status report to the Ethics Office four weeks before the above-referenced expiry date to either close the file or request a renewal of ethics approval. This document can be found at: http://www.research.uottawa.ca/ethics/forms.html.

If you have any questions, please do not hesitate to contact the Ethics Office at extension 5387 or by e-mail at: ethics@uOttawa.ca.

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Appendix B

Coach Information Letter

To whom it may concern,

I am contacting you in the hope that you will consider endorsing our research project and grant permission for us to recruit participants from your organization.

This study is the first stage of a four stage doctoral dissertation project conducted by Mr. Rathwell under the supervision of Professor Young at the University of Ottawa. Its purpose is to examine the relationships between athletes' perceptions of coach leadership behaviours and their perceptions of life skill development afforded through their participation in Canadian University sport. Through an online survey based questionnaire, athletes will be asked about their perceptions of life skill development experiences afforded through university sport, as well as their perceptions of their coaches' leadership behaviours that target life skill development.

With your permission, we would like for you to contact the athletes from your organization through e-mail invitations. When athletes are recruited via email, they will be invited to visit a website URL that will link them to a letter of information about our study as well as our safe and secure online survey.

The entire study consists of one online survey for varsity athletes. Athletes will be invited to participate separately, and to not complete the survey in the presence of any other teammate or any members of your coaching staff. The survey is written in English; therefore, it is important that all athletes are able to read, write, and understand English. In total the survey will take athletes approximately 45 minutes to complete. Athletes will receive an initial e-mail asking them to participate that will instruct them to link to an online survey that is certified safe and secure.

To thank athletes for their contribution to the research project, they will be given the option to enter their name to win one of six cash prizes of $50. All athletes who begin the first component of the online study will have their name automatically entered in the draw, regardless of whether they decide to withdraw from further participating in the research project. Upon completion of the study, six names will be randomly selected amongst those who have entered and the people whose names have been drawn will be informed by email. To win the prize, the person must correctly answer a skill testing question. If each winner cannot be reached within 14 days from the date of the draw, the prizes will be awarded to the subsequent names that are randomly selected and so on until the prizes have been awarded. The odds of winning a

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prize will depend on the number of eligible entries received. The prize must be accepted as awarded or forfeited. The name that athletes provide when they enter the draw is collected for the purpose of contacting them if their name is selected in the draw. Their name and the contact information they have provided will be kept confidential and then destroyed once the prizes have been awarded. We reserve the right to cancel the draw or cancel the awarding of the prizes if the integrity of the draw or the research or the confidentiality of the participants is compromised. This draw is governed by the applicable laws of Canada.

If athletes agree to participate, all of the information that they provide will remain completely confidential. This study is occurring at multiple Universities simultaneously, thus, data will be analyzed and reported at a group level, and collapsed across programs in order to protect the confidentiality of any one program or school. We may publish the findings from this research in the future, but all publications will pertain to data that will be analyzed at a group level. At no point will data be published or shared that includes any personally identifiable information.

All original data will be electronic in nature and will be stored using the certified-secure online survey provider "Fluid Surveys" and protected by a password required to log into the account. Any downloaded original data will be stored on a password protected computer in the supervisor's locked office for the full duration of the conservation period. Data will be conserved for 10 years, starting after the completion of the pilot study. This stage is expected to be completed by April 30, 2015 and therefore the data will be conserved until April 30, 2025. Following the conservation period all data will be deleted or destroyed by the research team.

Participation in the study is entirely voluntary. If at any time an athlete wishes to withdraw from the study, he or she may do so freely without penalty of any kind. There is the very slight possibility that certain questions about athletes' experiences in sport may cause them to feel emotionally uncomfortable. In this case, they may contact the Mental Health Crisis Line (1-866-996-0991) to help with such discomfort. The Mental Health Crisis Line is a 24-hour community services crisis line for counseling and concerns regarding emotional distress.

This study has the potential to allow University sport programs to determine the life skill development experiences of student athletes. Moreover, this study will inform us of how the values and behaviours of Canadian coaches in higher education institutions can impact how student-athletes learn the skills needed to strive for various personal and academic outcomes. In light of this, we ask that you distribute the Athlete Recruitment Letter (Appendix B) to your athletes via e-mail. The recruitment letters will provide information on the study, contain the contact information of the primary researcher, and invite interested individuals to visit our survey website's URL (our survey will be

hosted by www.fluidsurveys.com). If you choose to forward the script, you will find the recruitment script attached to the email you received from Scott Rathwell regarding the current study.

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Appendix C

Athlete Recruitment Letter (Stage One)

Dear participant,

We have received permission to ask you to consider taking part in a research study and we thank you for your interest in this research. This study is the first stage of a four stage doctoral dissertation project with the School of Human Kinetics at the University of Ottawa. Its purpose is to examine the relationships between athletes' perceptions of coach leadership behaviours and their perceptions of life skill development experiences within the context of Canadian university sport. Through an online survey based questionnaire, athletes will be asked about their perceptions of life skill development experiences afforded through university sport, as well as their perceptions of their coaches' leadership behaviours that target life skill development.

This stage of the research project consists of a single online questionnaire. The questionnaire is written in English; therefore, it is important that you are able to read, write, and understand English. This online questionnaire is certified safe and secure and only the investigators will have access to your information. The questionnaire should take you approximately 45 minutes to complete.

The study is being conducted in accordance with research ethics procedures at the University of Ottawa. It is important for you to understand that your involvement in the research is entirely voluntary. You are not required to participate and there will be no negative consequences if you choose not to do so. If you wish to disregard or delete this invitation, you may do so freely without penalty of any kind. If, after completion of the study, you wish to withdraw, you may do so by contacting the researchers and your information will be subsequently destroyed.

If you agree to participate, all of the information that you provide will remain completely confidential. This study is occurring at multiple Universities simultaneously, thus, data will be analyzed and reported at a group level, and collapsed across programs in order to protect the confidentiality of any one program or school. We may publish the findings from this research in the future, but all publications will pertain to data that will be analyzed at a group level. At no point will data be published or shared that includes any personally identifiable information.

All original data will be electronic in nature and will be stored using the certified-secure online survey provider "Fluid Surveys" and protected by a password required to log into the account. Any downloaded original data will be stored on a password protected computer in the supervisor's locked office for the full duration of the conservation period. Data will be conserved for 10

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years, starting after the completion of the pilot study. This stage is expected to be completed by August 1, 2014 and therefore the data will be conserved until August 1, 2024. Following the conservation period all data will be deleted or destroyed by the research team.

There is the very slight possibility that certain questions about your experiences in university sport may cause you to feel emotionally uncomfortable. In this case, you may contact the researchers below to request information for appropriate resources (24-hour community services for counseling and concerns regarding emotional distress) to help with such discomfort.

If you have any questions about the survey or the nature of the study, please feel free to contact the primary investigator listed below.

To complete the survey, you can click on the link provided below. If you choose to complete the survey, we ask that you complete it alone. Please do not complete the survey in the presence of any other teammate or any members of your coaching staff.

https://fluidsurveys.com/surveys

Thank you for your interest in the research, your participation is appreciated.

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Appendix D

Athlete Consent Letter (Stage One)

Dear participant,

We have received permission to ask you to consider taking part in a research study and we thank you for your interest in this research. This study is the first stage of a four stage doctoral dissertation project with the School of Human Kinetics at the University of Ottawa. Its purpose is to examine the relationships between athletes' perceptions of coach leadership behaviours and their perceptions of life skill development experiences within the context of Canadian university sport. Through an online survey based questionnaire, athletes will be asked about their perceptions of life skill development experiences afforded through university sport, as well as their perceptions of their coaches' leadership behaviours that target life skill development.

This stage of the research project consists of a single online questionnaire. The questionnaire is written in English; therefore, it is important that you are able to read, write, and understand English. This online questionnaire is certified safe and secure and only the investigators will have access to your information. The questionnaire should take you approximately 45 minutes to complete.

The study is being conducted in accordance with research ethics procedures at the University of Ottawa. It is important for you to understand that your involvement in the research is entirely voluntary. You are not required to participate and there will be no negative consequences if you choose not to do so. If you wish to disregard or delete this invitation, you may do so freely without penalty of any kind. If, after completion of the study, you wish to withdraw, you may do so by contacting the researchers and your information will be subsequently destroyed.

If you agree to participate, all of the information that you provide will remain completely confidential. This study is occurring at multiple Universities simultaneously, thus, data will be analyzed and reported at a group level, and collapsed across programs in order to protect the confidentiality of any one program or school. We may publish the findings from this research in the future, but all publications will pertain to data that will be analyzed at a group level. At no point will data be published or shared that includes any personally identifiable information.

All original data will be electronic in nature and will be stored using the certified-secure online survey provider "Fluid Surveys" and protected by a password required to log into the account. Any downloaded original data will be stored on a password protected computer in the supervisor's locked office for the full duration of the conservation period. Data will be conserved for 10

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years, starting after the completion of the pilot study. This stage is expected to be completed by August 1, 2014 and therefore the data will be conserved until August 1, 2024. Following the conservation period all data will be deleted or destroyed by the research team.

There is the very slight possibility that certain questions about your experiences in university sport may cause you to feel emotionally uncomfortable. In this case, you may contact the researchers below to request information for appropriate resources (24-hour community services for counseling and concerns regarding emotional distress) to help with such discomfort.

If you have any questions about the survey or the nature of the study, please feel free to contact the primary investigator listed below. If you have concerns about the content of the questionnaire or the ethical conduct of the study, you may contact the Protocol Officer for Ethics in Research as indicated below.

To complete the survey, you can click next below. If you choose to complete the survey, we ask that you complete it alone. Please do not complete the survey in the presence of any other teammate or any members of your coaching staff.

By clicking the 'Next' button below, you indicate that you freely consent to participate in this study. This means that you have been informed of the requirements of the research, understand that you have the opportunity to ask questions and discuss this study, and have been assured that your information will remain confidential. If you wish to withdraw from the study after submitting the questionnaire, please indicate to the researcher your intention to withdraw by e-mail. Your information will be removed from the study upon your request and destroyed. Please print a copy of the consent form to keep for your personal records.

[*Insert 'Next' button*]

Protocol Officer for Ethics in Research
Research Grant and Ethics Services
Tabaret Hall, Room 154
University of Ottawa
Ottawa, Ontario, K1N 6N5
Email: ethics@uottawa.ca
Phone: (613)562-5387

Appendix E

Athlete Demographic Questionnaire (Stage One)

1. What University do you attend:

2. Please indicate your sex:

3. Please indicate your birthday (DD/MM?YY):

4. How many years/months have you been a varsity athlete?

5. What is your current academic status?

Options: *Undergraduate Student, Graduate Student*

Options: *Full time, Part-time*

6. Which university sport do you currently compete in?
   a) Sport 1 (Sport in which you interact with your coach the most)?
   b) Sport 2 (If applicable)

7. What year of eligibility are you currently in?
   a) Sport 1 (Sport in which you interact with your coach the most)?
   b) Sport 2 (If applicable)

8. What is your player status on your team?
   a) Sport 1 (Sport in which you interact with your coach the most)?
   b) Sport 2 (If applicable)

Options: *Starter, Non-starter, Member of practice team, I don't know*

9. What is the sanction of your sport team?
   a) Sport 1 (Sport in which you interact with your coach the most)?
   b) Sport 2 (If applicable)

Options: *CIS, Competitive club*

Please think of the coach with whom you interact most

10. What coaching position does this coach occupy?

Options: *Head coach, Head assistant coach, Assistant coach, Position coach, Other*

11. How many seasons have you been coached by this coach?

12. How frequently do you interact with this coach during practice/training?

Options: *Never, Very Rarely, Rarely, Often, All the time*

13. How frequently do you interact with this coach during games?

Options: *Never, Very Rarely, Rarely, Often, All the time*

14. How frequently do you interact with this coach outside of sport?

Options: *Never, Very Rarely, Rarely, Often, All the time*

15. How important are you interactions with this coach during practice/training?

Options: *Very unimportant, Unimportant, Neutral, Important, Very Important*

16. How important are you interactions with this coach during games?

Options: *Very unimportant, Unimportant, Neutral, Important, Very Important*

17. How important are you interactions with this coach outside of sport?

Options: *Very unimportant, Unimportant, Neutral, Important, Very Important*

Appendix F

99 Item Modified YES 2.0 (Stage One)

Instructions: The following questionnaire will assess the experiences afforded to you through your participation in university sport. Based on your current or recent involvement, please rate the level to which you agree or disagree with the following statements as they relate to your participation in your university sport program.

1	2	3	4	5	6	7
Strongly Disagree	Disagree	Somewhat Disagree	Uncertain	Somewhat Agree	Agree	Strongly Agree

As a result of my involvement in university sport:

Identity

1. I am more confident trying out new things
2. I feel that my life has taken a positive turn
3. I am more comfortable trying new ways of acting around people
4. I experience things that I do not get to experience anywhere else
5. I think more about my future
6. I think more about who I am
7. I am more confident that I can make a difference in the world
8. I have a better understanding of my ethnic or racial heritage
9. I have a better understanding of what I am good at
10. I know more about what I like and dislike

Initiative

11. I am better at setting goals for myself
12. I am better at finding new ways of achieving my goals
13. I am better at considering possible obstacles when making plans
14. I am more capable of putting all my energy into an activity that is important to me
15. I am better at pushing myself
16. I more capable of focusing my attention
17. I am better at developing plans for solving a problem
18. I am better at setting my priorities
19. I am better at practicing self-discipline
20. I am better at learning from others by observing how they solve their problems
21. I am more capable of using my imagination to solve a problem
22. I am better able to organize my time and not procrastinate
23. I have a stronger belief that hard work pays off
24. I am better at considering how other people fit into my plans
25. I am more capable of getting my homework done in order to have time for my other activities

Basic Skills

26. I am better at controlling my temper
27. I am more capable of dealing with fear and anxiety
28. I am better at handling stress
29. I have a stronger understanding of how my emotions affect my performance
30. I feel that I have improved my skills as an academic
31. I believe that I have improved my skills for finding information
32. I feel that I have improved my computer skills and ability to use the internet
33. I believe I have improved my creative skills
34. I believe my artistic skills have improved
35. I feel that my communication skills have improved
36. I believe my athletic skills have improved
37. I feel my physical skills have improved
38. I am more capable of relaxing
39. I am better at expressing my emotions

Interpersonal Relationships

40. I have made more friends from the opposite gender
41. I have a better understanding of what I have in common with people from different backgrounds
42. I have become better acquainted with someone from a different ethnic group
43. I have made more friends that come from different social classes (richer or poorer)
44. I am more confident about my ability to stand up for the things I believe are morally right
45. I discuss morals and values more often with others
46. I am more confident about my abilities to help others
47. I am more confident about my ability to change my school or community for the better
48. I am better able to make a difference in my community
49. I am more appreciative of other people's backgrounds
50. I am more aware of the different obstacles other people face

Teamwork and Social Skills

51. I am better at compromising when working with others
52. I am better at sharing responsibility
53. I am more patient with others
54. I am more aware of how my emotions and attitude affect others in group situations
55. I am more aware of the fact that it is not necessary to like people in order to work with them
56. I am better at giving feedback
57. I am better at taking feedback
58. I know more about the challenges of being a leader
59. I am more confident that I can rise to the challenge when others are counting on me
60. I am better at being in charge of a group of peers
61. I am better at supporting others
62. I am more capable of standing up for myself

Adult Networks and Social Capital

63. I feel that I have improved my relationship with my parents/guardians
64. I feel that I have better conversations with my parents/guardians
65. I believe I have come to know more people in the off-campus community
66. I feel more supported by the off-campus community

67. I feel more a part of the off-campus community
68. I believe I have come to know more people in the on-campus community
69. I feel more supported by the on-campus community
70. I feel more a part of the on-campus community
71. More job or career opportunities have opened up for me
72. I feel more prepared for life after graduation
73. I have a greater desire to stay in school

Stress

74. I am often stressed
75. I am frequently unable to do things with family
76. I am unable to complete my assignments more often
77. I am frequently unable to study enough for tests
78. I often feel over-worked

Negative Peer Influences

79. I often feel pressured to do things I don't want to do
80. I often do things that are morally inappropriate
81. I am often ridiculed by peers
82. I often consume alcohol
83. I frequently take drugs

Social Exclusion

84. I often feel like I don't belong
85. I often feel left out
86. I am frequently exposed to social cliques

Negative Group Dynamics

87. I am often asked to do more than my fair share
88. I am frequently exposed to inappropriate sexual comments, jokes, or gestures
89. I am often discriminated against because of my gender, race, ethnicity, disability, or sexual orientation
90. I often hear negative things about sport

Inappropriate Adult Behavior

91. I am frequently exposed to leaders who "hit" on me (make sexual advances)
92. I am frequently exposed to leaders who make inappropriate sexual comments or jokes
93. I am frequently exposed to leaders who encourage me to do things I believe are morally wrong
94. I am frequently exposed to leaders who are controlling and manipulative
95. I am frequently exposed to leaders who put down my ideas
96. I am frequently exposed to leaders who blame me for things beyond my control
97. I am often exposed to unreasonable demands on my time by my coaches
98. I am often exposed to leaders who play favorites
99. I am often exposed to leaders who talk down to me

Appendix G

Multifactor Leadership Questionnaire – 5X Rater Form (Stage One)

Instructions: Beginning on the next page, you will be asked to read statements describing various leadership styles and asked to judge how they pertain to the coach with whom you interact with the most. Please judge how frequently each statement fits your coach. When judging each of the statements, consider your coach's leadership styles as they relate to your experiences as a student-athlete. This includes all requirements placed on you by your varsity sport organization (university sport team). Organizational requirements should be understood as the various roles and duties that your coach expects of you as a student athlete.

For the following survey, please think of the coach with whom you interact with the most.

This questionnaire is used to describe the leadership style of the above-mentioned individual as you perceive it. Answer all items on this answer sheet. **If an item is irrelevant, or if you are unsure or do not know the answer, leave the answer blank.** Please answer this questionnaire anonymously.

Forty-five descriptive statements are listed on the following pages. Judge how frequently each statement fits the person you are describing. Use the following rating scale:

Not at all	Once in a while	Sometimes	Fairly often	Frequently if not always
0	1	2	3	4

1. Provides me with assistance in exchange for my efforts 0 1 2 3 4
2. *Re-examines critical assumptions to question whether they are appropriate 0 1 2 3 4
3. Fails to interfere until problems become serious 0 1 2 3 4
4. Focuses attention on irregularities, mistakes, exceptions, and deviations from standards 1 2 3 4
5. Avoids getting involved when important issues arise 0 1 2 3 4
6. *Talks about his/her most important values and beliefs 0 1 2 3 4
7. Is absent when needed 0 1 2 3 4
8. *Seeks differing perspectives when solving problems 0 1 2 3 4
9. *Talks optimistically about the future 0 1 2 3 4
10. *Instills pride in me for being associated with him/her 0 1 2 3 4
11. Discusses in specific terms who is responsible for achieving performance targets 0 1 2 3 4
12. Waits for things to go wrong before taking action.....0 1 2 3 4
13. *Talks enthusiastically about what needs to be accomplished.....0 1 2 3 4
14. *Specifies the importance of having a strong sense of purpose.....0 1 2 3 4
15. *Spends time teaching and coaching.....0 1 2 3 4
16. Makes clear what one can expect to receive when performance goals are achieved ...0 1 2 3 4
17. Shows that he/she is a firm believer in "If it ain't broke, don't fix it."....0 1 2 3 4
18. *Goes beyond self-interest for the good of the group 0 1 2 3 4
19. *Treats me as an individual rather than just as a member of a group 0 1 2 3 4
20. Demonstrates that problems must become chronic before taking action 0 1 2 3 4

21. *Acts in ways that builds my respect.....0 1 2 3 4
22. Concentrates his/her full attention on dealing with mistakes, complaints, and ……0 1 2 3 4
23. *Considers the moral and ethical consequences of decisions 0 1 2 3 4
24. Keeps track of all mistakes.....0 1 2 3 4
25. *Displays a sense of power and confidence 0 1 2 3 4
26. *Articulates a compelling vision of the future.....0 1 2 3 4
27. Directs my attention toward failures to meet standards.....0 1 2 3 4
28. Avoids making decisions 0 1 2 3 4
29. *Considers me as having different needs, abilities, and aspirations from others 0 1 2 3 4
30. *Gets me to look at problems from many different angles 0 1 2 3 4
31. *Helps me to develop my strengths.....0 1 2 3 4
32. *Suggests new ways of looking at how to complete assignments.....0 1 2 3 4
33. Delays responding to urgent questions.....0 1 2 3 4
34. *Emphasizes the importance of having a collective sense of mission.....0 1 2 3 4
35. Expresses satisfaction when I meet expectations.....0 1 2 3 4
36. *Expresses confidence that goals will be achieved 0 1 2 3 4
37. Is effective in meeting my job-related needs 0 1 2 3 4
38. Uses methods of leadership that are satisfying 0 1 2 3 4
39. Gets me to do more than I expected to do 0 1 2 3 4
40. Is effective in representing me to higher authority 0 1 2 3 4
41. Works with me in a satisfactory way.....0 1 2 3 4
42. Heightens my desire to succeed 0 1 2 3 4
43. Is effective in meeting organizational requirements 0 1 2 3 4
44. Increases my willingness to try harder 0 1 2 3 4
45. Leads a group that is effective 0 1 2 3 4

Appendix H

Athlete criterion questions (Stage One)

Thank you for completing our online survey. You have just participated in the first stage of our four stage research project. For stage two, we will be conducting face to face interviews with university athletes about their perceptions of life skill development opportunities, as well as their perceptions on related coach leadership behaviours. For stage four, we will be asking athletes to respond to a similar but shorter version of the online survey you completed today.

Please indicate if you would be willing to be contacted via email for the second stage of this research project.

____Yes, I am interested and give you permission to contact me via email about my participation in stage two of this research project.

____ No, please do not contact me about participating in the second stage of this research project.

Please indicate if you would be willing to be contacted via email for the fourth stage of this research project.

____Yes, I am interested and give you permission to contact me via email about my participation in stage four of this research project.

____ No, please do not contact me about participating in the third stage of this research project.

If you have selected yes for either stage and you would like to be contacted at a different email address than the one you provided in the questionnaire, please indicate your preferred email address below. Any email address you provide will not be shared or used for any other purposes other than contacting you to inform you of our second stage of our research project.
I would like to be contacted at the following email address _____

Appendix I

Coach criterion questions (Stage One)

For Stage Three, we will be interviewing university coaches whom are recognized as being someone who invests considerable time, effort, and concern towards developing athletes' life skills.

If you would like to recommend a coach you have had in the past that you believe meets our criteria, please fill out the following information so that we may contact them.

I recommend (*name of coach*), the (*name of sport coached*) coach from (*name of university*) as being a coach who invested considerable time, effort, and concern towards developing my life skills.

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Appendix J

Ethics Approval Notice

Health Sciences and Science REB

Principal Investigator / Supervisor / Co-investigator(s) / Student(s)

First Name	Last Name	Affiliation	Role
Bradley	Young	Health Sciences / Human Kinetics	Supervisor
Scott	Rathwell	Health Sciences / Human Kinetics	Student Researcher

File Number: h04-14-06

Type of Project: PhD Thesis

Title: Exploring the Relationship Between Coaches' Leadership Behaviours and Athletes' Life Skill Development Experiences in Canadian University, College, and CEGEP Sport.

Approval Date (mm/dd/yyyy)	Expiry Date (mm/dd/yyyy)	Approval Type
05/07/2015	05/06/2016	Ia (partial)

(Ia: Approval, Ib: Approval for initial stage only)

Special Conditions / Comments:

Some institutions require researchers to obtain REB approval from their institutions in order to access their students. Copies of these permissions/approvals (or a written confirmation if an ethics review is not required) must be submitted to the Ethics Office before any research activity can take place. Partial ethics approval may be granted individually for each research site (institution), so that recruitment and data collection may start within the respective site (for which permission has been submitted). Once all permissions have been received, full approval may be granted.

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www.recherche.uottawa.ca/deontologie/ www.research.uottawa.ca/ethics/

Université d'Ottawa University of Ottawa
Bureau d'éthique et d'intégrité de la recherche Office of Research Ethics and Integrity

This is to confirm that the University of Ottawa Research Ethics Board identified above, which operates in accordance with the Tri-Council Policy Statement (2010) and other applicable laws and regulations in Ontario, has examined and approved the ethics application for the above named research project. Ethics approval is valid for the period indicated above and subject to the conditions listed in the section entitled "Special Conditions / Comments".

During the course of the project, the protocol may not be modified without prior written approval from the REB except when necessary to remove participants from immediate endangerment or when the modification(s) pertain to only administrative or logistical components of the project (e.g., change of telephone number). Investigators must also promptly alert the REB of any changes which increase the risk to participant(s), any changes which considerably affect the conduct of the project, all unanticipated and harmful events that occur, and new information that may negatively affect the conduct of the project and safety of the participant(s). Modifications to the project, including consent and recruitment documentation, should be submitted to the Ethics Office for approval using the "Modification to research project" form available at: http://research.uottawa.ca/ethics/submissions-and-reviews.

Please submit an annual report to the Ethics Office four weeks before the above-referenced expiry date to request a renewal of this ethics approval. To close the file, a final report must be submitted. These documents can be found at: http://research.uottawa.ca/ethics/submissions-and-reviews.

If you have any questions, please do not hesitate to contact the Ethics Office at extension 5387 or by e-mail at: ethics@uOttawa.ca.

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École des sciences de l'activité physique

University of Ottawa
Faculty of Health Sciences
School of Human Kinetics

Appendix K

Athlete Recruitment Letter (Stage Two)

Dear participant,

You have previously acknowledged your willingness to be contacted for the second study of this research project and we thank you for your continued interest in this research. This study is stage two of a four stage doctoral dissertation project with the School of Human Kinetics at the University of Ottawa. Its purpose is to describe how coach leadership behaviours and athlete life skill development experiences are perceived by athletes within the context of Canadian university sport. For this study, you will be asked about your life skill development experiences afforded through university sport, as well as your perceptions of your coaches' leadership behaviours that target life skill development.

This stage of the research project consists of a face to face interview. The interview will be conducted in English; therefore, it is important that you are able speak and understand English. This interview will take place at a time and location of your choosing and will last approximately 60 to 90 minutes.

The study is being conducted in accordance with research ethics procedures at the University of Ottawa. It is important for you to understand that your involvement in the research is entirely voluntary. You are not required to participate and there will be no negative consequences if you choose not to do so. If you wish to disregard or delete this invitation, you may do so freely without penalty of any kind. If, after completion of the study, you wish to withdraw, you may do so by contacting the researchers and your information will be subsequently destroyed.

If you agree to participate, all of the information that you provide will remain completely confidential. Once the interview is complete, you will obtain a typed transcript, which may be edited at your discretion. The researchers will not disclose names or identify the study participants at any time. This study is occurring at multiple Universities simultaneously, thus, data will be analyzed and reported at a group level, and collapsed across programs in order to protect the confidentiality of any one program or school. We may publish the findings from this research in the future, but all publications will pertain to data that will be analyzed at a group level. At no point will data be published or shared that includes any personally identifiable information.

All data and audio recordings will be securely stored in a password protected computer for a period of 10 years. All paper copies of questionnaires and

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consent forms will be stored in a locked laboratory for a period of 10 years. The data, audio recordings, and all paper copies will be destroyed 10 years after the study ends. This stage is expected to be completed by August 1, 2014 and therefore the data will be conserved until August 1, 2024. Following the conservation period all data will be deleted or destroyed by the research team.

If you have any questions about the interview or the nature of the study, please feel free to contact the primary investigator listed below.

To participate in an interview, please email the primary investigator and disclose your interest in participating in stage two of this research project. You will find the necessary contact information at the bottom of this page.

Thank you for your interest in the research, your participation is appreciated.

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l'activité physique

University of Ottawa
Faculty of Health
Sciences

School of Human
Kinetics

Appendix L

Athlete Consent Letter (Stage Two)

This study is stage two of a four stage doctoral dissertation project with the School of Human Kinetics at the University of Ottawa. Its purpose is to describe how coach leadership behaviours and athlete life skill development experiences are perceived by athletes and coaches within the context of Canadian university sport. As an athlete, you will be asked about your life skill development experiences afforded through university sport, as well as your perceptions of your coaches' leadership behaviours that target life skill development.

This stage of the research project consists of a face to face interview. The interview will be conducted in English; therefore, it is important that you are able speak and understand English. This interview will take place at a time and location of your choosing and will last approximately 60 to 90 minutes.

The study is being conducted in accordance with research ethics procedures at the University of Ottawa. It is important for you to understand that your involvement in the research is entirely voluntary. You are not required to participate and there will be no negative consequences if you choose not to do so. If you wish to disregard or delete this invitation, you may do so freely without penalty of any kind. If, after completion of the study, you wish to withdraw, you may do so by contacting the researchers and your information will be subsequently destroyed.

If you agree to participate, all of the information that you provide will remain completely confidential. Once the interview is complete, you will obtain a typed transcript, which may be edited at your discretion. The researchers will not disclose names or identify the study participants at any time. This study is occurring at multiple Universities simultaneously, thus, data will be analyzed and reported at a group level, and collapsed across programs in order to protect the confidentiality of any one program or school. We may publish the findings from this research in the future, but all publications will pertain to data that will be analyzed at a group level. At no point will data be published or shared that includes any personally identifiable information.

All data and audio recordings will be securely stored in a password protected computer for a period of 10 years. All paper copies of questionnaires and consent forms will be stored in a locked laboratory for a period of 10 years. The data, audio recordings, and all paper copies will be destroyed 10 years after the study ends. This stage is expected to be completed by August 1, 2014 and therefore the data will be conserved until August 1, 2024. Following the conservation period all data will be deleted or destroyed by the research team.

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If you have any questions about the interview or the nature of the study, please feel free to contact the primary investigator listed below. If you have concerns about the content of the interview or the ethical conduct of the study, you may contact the Protocol Officer for Ethics in Research as indicated below.

After reading the above statement and having had the directions verbally explained, it is now possible for you to freely consent and voluntarily agree to participate in this research project based on the terms outlined in this consent form. You may refuse to continue participation at any time, without penalty, and all information gathered will remain confidential. Please sign below if you agree to participate in this study.

_____ _____

Signature Date

I agree to the audio-taping of the interviews with the understanding that these recordings will be used solely for the purpose of transcribing these sessions.
Yes□ No□ _____
Initials

Protocol Officer for Ethics in Research
Research Grant and Ethics Services
Tabaret Hall, Room 154
University of Ottawa
Ottawa, Ontario, K1N 6N5
Email: ethics@uottawa.ca
Phone: (613)562-5387

Appendix M

Athlete Demographic Questionnaire (Stage Two)

1. Age:

2. E-mail:

3. How many years/months have you attended University?

4. How many years/months have you been a varsity athlete?

5. What varsity sport do you currently compete in?

6. What is your current playing position?

7. How long have you held your current playing position?

8. What coach do you interact with the most?

9. Which coaching position (e.g., head coach, position coach, and assistant coach) does the coach with whom you interact with the most occupy?

10. Please **RANK** the following goals of university sport programs in the order of importance according to your own personal opinion. In my opinion, a successful university sport program is one that develops athletes who _____

Goals

Succeed in their careers and personal life after leaving the program

RANK _____

Succeed on the field and accomplish many athletic accolades (i.e., win championships, go on to play professionally)

RANK _____

Succeed in the classroom, have high GPA's, and graduate from their program

RANK _____

Appendix N

Athlete Interview Guide (Stage Two)

Pre interview routine
Introduction
Consent Form
Demographic Questionnaire

Opening question: Briefly describe what it means to you to be a varsity athlete.

Key Questions:

Identity:
1. Through your participation in university sport, have you had experiences that have allowed you to get to know or to think about who you are?
    1. Can you provide an example?
    2. What did you learn about yourself?

2. Does this "identity" affect you in sport?
    - How? Examples?

Initiative experiences:
3. Through your participation in university sport, have you experienced challenges or issues related to being a university athletes?

4. Have you been able to manage or navigate any of these challenges?
    - How? Strategies or skills? (Goal setting, problem solving, time management, effort)
    - Other challenges that you have managed or navigated? Examples

5. Can you provide an example of how you have used what you have learned in the context of sport.

Emotional regulation:
6. Through your participation in university sport, have you had experiences where you learned about your emotions?
    - Can you provide some examples?

7. Have you had experiences where you learned about regulating your emotions?
    - Strategies or skills?

8. Can you provide an example of how you have used what you have learned about regulating your emotions in the context of sport.

Cognitive skills:

9. Through your participation in university sport, have you had experiences that have allowed learn something new that is both intellectual and meaningful to you?
    - Can you give some examples?
    - What did you learn? Skills or strategies for finding information?

10. Can you provide an example of how you have used what you have learned in the context of sport.

Team work and social skills:

11. Through your participation in university sport, have you had experiences where you have been required to work with others?

12. Have you encountered challenges or an awkwardness when working with others in sport?
    - How did you navigate these challenges or instances of awkwardness?

13. Do you use what you have learned in the context of sport.
    - How? Examples?

Positive relationships:

14. Through your participation in university sport, have you had experiences where you have established meaningful relationships with others?
    - Examples?

15. How are these relationships meaningful?
    - Are these relationship different than those outside of sport? How?

16. Have these relationships influenced the ways you act towards others and or any social norms that you would follow in sport?

Adult network and social capital: Define: Important adults who may benefit your success in the future.

17. Through sport you have experiences where developed your social capital by forming or improving relationships with important adults?
    - Can you give some examples of this?

18. Have these relationships influences your sport experience?
    - How? Examples?

19. Was what you learned self-initiated, or did someone else play a role in your learning?

- Who taught you?
- Who supported you? (Allowed, financial, resources, encouraged)

20. Did your coach play a role in what you learned?
    - What behaviours or interactions facilitated your learning?
        - Has your coach supported your learning? How?

21. Do you use (what was learned) outside of sport?
        - Can you provide some examples of how you use (what was learned) outside of sport?
        - Did anyone teach you to use (what was learned) outside of sport?
        - Did anyone support your use of (what was learned) outside of sport?
        - What convinced you that you use outside of sport

22. Did your coach play a role in your use of (what was learned) outside of sport?
        - What behaviours or interactions facilitated your use of (what was learned) outside of sport?
        - How has your coach supported your use of (what was learned) outside of sport.
        - Can you give an examples

Concluding Questions:

23. Would you like to add anything else related to our interview, or do you think anything is missing from the interview guide?

24. Do you have any final comments or questions?

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Faculty of Health Sciences

School of Human Kinetics

Appendix O

Coach Recruitment Letter (Stage 3)

Dear participant,

This study is stage two of a four stage doctoral dissertation project with the School of Human Kinetics at the University of Ottawa. We are inviting you to participate in our research study because you were identified by a number of athletes in stage one as a strong leader who emphasizes life development through sport. The purpose of this study is to describe how coach leadership behaviours and athlete life skill development experiences are perceived by coaches within the context of Canadian university sport. As a coach, you will be asked about the life skill development experiences afforded to your athletes through university sport, as well as your coach leadership behaviours that target life skill development.

This stage of the research project consists of a face to face interview. The interview will be conducted in English; therefore, it is important that you are able speak and understand English. This interview will take place at a time and location of your choosing and will last approximately 60 to 90 minutes.

The study is being conducted in accordance with research ethics procedures at the University of Ottawa. It is important for you to understand that your involvement in the research is entirely voluntary. You are not required to participate and there will be no negative consequences if you choose not to do so. If you wish to disregard or delete this invitation, you may do so freely without penalty of any kind. If, after completion of the study, you wish to withdraw, you may do so by contacting the researchers and your information will be subsequently destroyed.

If you agree to participate, all of the information that you provide will remain completely confidential. Once the interview is complete, you will obtain a typed transcript, which may be edited at your discretion. The researchers will not disclose names or identify the study participants at any time. This study is occurring at multiple Universities simultaneously, thus, data will be analyzed and reported at a group level, and collapsed across programs in order to protect the confidentiality of any one program or school. We may publish the findings from this research in the future, but all publications will pertain to data that will be analyzed at a group level. At no point will data be published or shared that includes any personally identifiable information.

All data and audio recordings will be securely stored in a password protected computer for a period of 10 years. All paper copies of questionnaires and consent forms will be stored in a locked laboratory for a period of 10 years. The data, audio recordings, and all paper copies will be destroyed 10 years

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after the study ends. This stage is expected to be completed by August 1, 2014 and therefore the data will be conserved until August 1, 2024. Following the conservation period all data will be deleted or destroyed by the research team. If you have any questions about the interview or the nature of the study, please feel free to contact the primary investigator listed below.

To participate in an interview, please email the primary investigator and disclose your interest in participating in stage two of this research project. You will find the necessary contact information at the bottom of this page.

Thank you for your interest in the research, your participation is appreciated.

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University of Ottawa
Faculty of Health Sciences
School of Human Kinetics

Appendix P

Coach Consent Letter (Stage 3)

Dear participant,

This study is stage two of a four stage doctoral dissertation project with the School of Human Kinetics at the University of Ottawa. We are inviting you to participate in our research study because you were identified by a number of athletes in stage one as a strong leader who emphasizes life development through sport. The purpose of this study is to describe how coach leadership behaviours and athlete life skill development experiences are perceived by athletes and coaches within the context of Canadian university sport. As a coach, you will be asked about the life skill development experiences afforded to your athletes through university sport, as well as your coach leadership behaviours that target life skill development.

This stage of the research project consists of a face to face interview. The interview will be conducted in English; therefore, it is important that you are able speak and understand English. This interview will take place at a time and location of your choosing and will last approximately 60 to 90 minutes.

The study is being conducted in accordance with research ethics procedures at the University of Ottawa. It is important for you to understand that your involvement in the research is entirely voluntary. You are not required to participate and there will be no negative consequences if you choose not to do so. If you wish to disregard or delete this invitation, you may do so freely without penalty of any kind. If, after completion of the study, you wish to withdraw, you may do so by contacting the researchers and your information will be subsequently destroyed.

If you agree to participate, all of the information that you provide will remain completely confidential. Once the interview is complete, you will obtain a typed transcript, which may be edited at your discretion. The researchers will not disclose names or identify the study participants at any time. This study is occurring at multiple Universities simultaneously, thus, data will be analyzed and reported at a group level, and collapsed across programs in order to protect the confidentiality of any one program or school. We may publish the findings from this research in the future, but all publications will pertain to data that will be analyzed at a group level. At no point will data be published or shared that includes any personally identifiable information.

All data and audio recordings will be securely stored in a password protected computer for a period of 10 years. All paper copies of questionnaires and consent forms will be stored in a locked laboratory for a period of 10 years. The data, audio recordings, and all paper copies will be destroyed 10 years

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after the study ends. This stage is expected to be completed by August 1, 2014 and therefore the data will be conserved until August 1, 2024. Following the conservation period all data will be deleted or destroyed by the research team. If you have any questions about the interview or the nature of the study, please feel free to contact the primary investigator listed below. If you have concerns about the content of the interview or the ethical conduct of the study, you may contact the Protocol Officer for Ethics in Research as indicated below.

After reading the above statement and having had the directions verbally explained, it is now possible for you to freely consent and voluntarily agree to participate in this research project based on the terms outlined in this consent form. You may refuse to continue participation at any time, without penalty, and all information gathered will remain confidential. Please sign below if you agree to participate in this study.

_____ _____

Signature Date

I agree to the audio-taping of the interviews with the understanding that these recordings will be used solely for the purpose of transcribing these sessions.
Yes□ No□ _____
Initials

Protocol Officer for Ethics in Research
Research Grant and Ethics Services
Tabaret Hall, Room 154
University of Ottawa
Ottawa, Ontario, K1N 6N5
Email: ethics@uottawa.ca
Phone: (613)562-5387

Appendix Q

Coach Demographic Questionnaire (Stage 3)

1. Name:
2. Age:
3. E-mail:
4. What is your current coaching position?
5. How long have you held your current coaching position?
6. How long have you been working with your current team coach?
7. How many years have you been coaching?
8. What is the highest level of education you have completed?
9. What is the highest level of coaching certification you have completed (new and old stream)?
10. Please **RANK** the following goals of university sport programs in the order of importance according to your own personal opinion. In my opinion, a successful university sport program is one that develops athletes who _____

Goals

Succeed in their careers and personal life after leaving the program

RANK _____

Succeed on the field and accomplish many athletic accolades (i.e., win championships, go on to play professionally)

RANK _____

Succeed in the classroom, have high GPA's, and graduate from their program

RANK _____

Appendix R

Coach Interview Guide (Stage Three)

Pre interview routine
Introduction
Consent Form
Demographic Questionnaire

Opening Questions

1. Briefly describe what it means to you to be a varsity athlete.
2. Briefly describe what it means to you to be a varsity coach.

Key Questions:

Identity:

3. As a result of their participation in university sport, have your athletes been afforded experiences that allowed them get to know or to think about who they are as a person?
   3. Have you witnessed this
   4. Can you provide an example?
   5. What did you they learned about themselves?

4. Do you think that this "identity" affects how they behave in sport?
   - How? Examples?

Initiative experiences:

5. Have your athletes experienced challenges or issues related to being a university athletes?

6. Do you think they are able to manage or navigate any of these challenges?
   - How? Strategies or skills? (Goal setting, problem solving, time management, effort)
   - Other challenges that they have managed or navigated? Examples

7. Do you know if they use these strategies in the context of sport.

Emotional regulation:

8. As a result of their participation in university sport, have your athletes had experiences where they learned about their emotions?
   - Have you witnessed them learning about their emotions
   - Can you provide some examples?

9. Do they have experiences where they learned about regulating their emotions?
   - What skills have you seen them use?

10. Can you provide an example of how they use what they learned about regulating emotions in the context of sport?

Cognitive skills:

11. As a result of their participation in university sport, have your athletes had experiences where they got to learn something that is both intellectual and meaningful?
    - Can you give some examples?
    - What have you seen them learn? Skills or strategies for finding information?

12. Can you provide an example of how your athletes have used what they learned in the context of sport.

Team work and social skills:

13. As a result of their participation in university sport, have your athletes had experiences where they have been required to work with others?

14. Have you witnessed any challenges or an awkwardness when your athletes were working with others in sport?
    - How did they navigate these challenges or instances of awkwardness?

15. Do they use what you have learned in the context of sport.
    - How? Examples?

Positive relationships:

16. As a result of their participation in university sport, have your athletes had experiences where they have established meaningful relationships with others?
    - Examples?

17. How are these relationships meaningful?
    - Are these relationship different than those outside of sport? How?

18. Have these relationships influenced the ways they act towards others and or any social norms that you would follow in sport?

Adult network and social capital: Define: Important adults who may benefit your success in the future.

19. As a result of their participation in university sport, have your athletes had experiences where they developed social capital by forming or improving relationships with important adults?
    - Can you give some examples of this?

20. Have these relationships influences their sport experience?
    - How? Examples?

21. Was what they learned self-initiated, or did someone else play a role in their learning?
    - Who taught them?
    - Who supported them? (allowed, financial, resources, encouraged)

22. As a coach, did you play a role in what you learned?
    - What behaviours or interactions facilitated their learning?
        - How have you supported their learning of (what they learned)
        - Can you give an examples

23. Do they use (what was learned) outside of sport?
        - Can you provide some examples of how they use (what was learned) outside of sport?
        - Did anyone teach them to use (what was learned) outside of sport?
        - Did anyone support their use of (what was learned) outside of sport?
        - What convinced you that they use (what was learned) outside of sport?

24. Did you play a role in your athletes' use of (what they have learned) outside of sport?
        - What behaviours or interactions did you use to facilitate their use of (what was learned) outside of sport?
        - How have you supported their use of (what was learned) outside of sport.
        - Can you give an examples

Concluding Questions:

25. Would you like to add anything else related to our interview?

26. Do you have any final comments or questions?

Université d'Ottawa University of Ottawa
Bureau d'éthique et d'intégrité de la recherche Office of Research Ethics and Integrity

Appendix S

Ethics Approval Notice

Health Sciences and Science REB

Principal Investigator / Supervisor / Co-investigator(s) / Student(s)

First Name	Last Name	Affiliation	Role
Bradley	Young	Health Sciences / Human Kinetics	Supervisor
Scott	Rathwell	Health Sciences / Human Kinetics	Student Researcher

File Number: H04-14-06B

Type of Project: PhD Thesis

Title: A Qualitative Exploration of the Relationship Between Coaches' Leadership Behaviours and Athletes' Life Skill Development Experiences in Canadian University, College, and CEGEP Sport.

Approval Date (mm/dd/yyyy)	Expiry Date (mm/dd/yyyy)	Approval Type
08/28/2014	08/27/2015	Ia

(Ia: Approval, Ib: Approval for initial stage only)

Special Conditions / Comments:

N/A

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www.recherche.uottawa.ca/deontologie/ www.research.uottawa.ca/ethics/

Université d'Ottawa University of Ottawa
Bureau d'éthique et d'intégrité de la recherche Office of Research Ethics and Integrity

This is to confirm that the University of Ottawa Research Ethics Board identified above, which operates in accordance with the Tri-Council Policy Statement (2010) and other applicable laws and regulations in Ontario, has examined and approved the ethics application for the above named research project. Ethics approval is valid for the period indicated above and subject to the conditions listed in the section entitled "Special Conditions / Comments".

During the course of the project, the protocol may not be modified without prior written approval from the REB except when necessary to remove participants from immediate endangerment or when the modification(s) pertain to only administrative or logistical components of the project (e.g., change of telephone number). Investigators must also promptly alert the REB of any changes which increase the risk to participant(s), any changes which considerably affect the conduct of the project, all unanticipated and harmful events that occur, and new information that may negatively affect the conduct of the project and safety of the participant(s). Modifications to the project, including consent and recruitment documentation, should be submitted to the Ethics Office for approval using the "Modification to research project" form available at: http://www.research.uottawa.ca/ethics/forms.html.

Please submit an annual report to the Ethics Office four weeks before the above-referenced expiry date to request a renewal of this ethics approval. To close the file, a final report must be submitted. These documents can be found at: http://www.research.uottawa.ca/ethics/forms.html.

If you have any questions, please do not hesitate to contact the Ethics Office at extension 5387 or by e-mail at: ethics@uOttawa.ca.

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Faculty of Health Sciences

School of Human Kinetics

Appendix T

Coach Information Letter

To whom it may concern,

I am contacting you in the hope that you will consider endorsing our research project and grant permission for us to recruit participants from your organization.

This study is the final stage of a four stage doctoral dissertation project conducted by Mr. Rathwell under the supervision of Professor Young at the University of Ottawa. Its purpose is to examine Canadian university athletes' perceptions of life skill development experiences. Through an online survey based questionnaire, athletes in this stage will be asked about their perceptions of life skill development experiences afforded through university sport.

With your permission, we would like for you to contact the athletes from your organization through e-mail invitations. When athletes are recruited via email, they will be invited to visit a website URL that will link them to a letter of information about our study as well as our safe and secure online survey.

The entire study consists of one online survey for varsity athletes. Athletes will be invited to participate separately, and to not complete the survey in the presence of any other teammate or any members of your coaching staff. The survey is written in English; therefore, it is important that all athletes are able to read, write, and understand English. In total the survey will take athletes approximately 45 minutes to complete. Athletes will receive an initial e-mail asking them to participate that will instruct them to link to an online survey that is certified safe and secure.

To thank athletes for their contribution to the research project, they will be given the option to enter their name to win one of six cash prizes of $50. All athletes who begin the first component of the online study will have their name automatically entered in the draw, regardless of whether they decide to withdraw from further participating in the research project. Upon completion of the study, six names will be randomly selected amongst those who have entered and the people whose names have been drawn will be informed by email. To win the prize, the person must correctly answer a skill testing question. If each winner cannot be reached within 14 days from the date of the draw, the prizes will be awarded to the subsequent names that are randomly selected and so on until the prizes have been awarded. The odds of winning a prize will depend on the number of eligible entries received. The prize must be

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accepted as awarded or forfeited. The name that athletes provide when they enter the draw is collected for the purpose of contacting them if their name is selected in the draw. Their name and the contact information they have provided will be kept confidential and then destroyed once the prizes have been awarded. We reserve the right to cancel the draw or cancel the awarding of the prizes if the integrity of the draw or the research or the confidentiality of the participants is compromised. This draw is governed by the applicable laws of Canada.

If athletes agree to participate, all of the information that they provide will remain completely confidential. This study is occurring at multiple Universities simultaneously, thus, data will be analyzed and reported at a group level, and collapsed across programs in order to protect the confidentiality of any one program or school. We may publish the findings from this research in the future, but all publications will pertain to data that will be analyzed at a group level. At no point will data be published or shared that includes any personally identifiable information.

All original data will be electronic in nature and will be stored using the certified-secure online survey provider "Fluid Surveys" and protected by a password required to log into the account. Any downloaded original data will be stored on a password protected computer in the supervisor's locked office for the full duration of the conservation period. Data will be conserved for 10 years, starting after the completion of the pilot study. This stage is expected to be completed by April 30, 2016 and therefore the data will be conserved until April 30, 2026. Following the conservation period all data will be deleted or destroyed by the research team.

Participation in the study is entirely voluntary. If at any time an athlete wishes to withdraw from the study, he or she may do so freely without penalty of any kind. There is the very slight possibility that certain questions about athletes' experiences in sport may cause them to feel emotionally uncomfortable. In this case, they may contact the Mental Health Crisis Line (1-866-996-0991) to help with such discomfort. The Mental Health Crisis Line is a 24-hour community services crisis line for counseling and concerns regarding emotional distress.

This study has the potential to allow University sport programs to determine the life skill development experiences of student athletes. Moreover, this study will inform us of how the values and behaviours of Canadian coaches in higher education institutions can impact how student-athletes learn the skills needed to strive for various personal and academic outcomes. In light of this, we ask that you distribute the Athlete Recruitment Letter (Appendix R) to your athletes via e-mail. The recruitment letters will provide information on the study, contain the contact information of the primary researcher, and invite interested individuals to visit our survey website's URL (our survey will be hosted by www.fluidsurveys.com). If you choose to forward the script, you

will find the recruitment script attached to the email you received from Scott Rathwell regarding the current study.

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Appendix U

Athlete Recruitment Letter (Stage 4)

Dear participant,

We have received permission to ask you to consider taking part in a research study and we thank you for your interest in this research. This study the final stage a four stage doctoral dissertation project with the School of Human Kinetics at the University of Ottawa. Its purpose is to examine Canadian university athletes' perceptions of life skill development experiences. Through an online survey based questionnaire, athletes will be asked about their perceptions of life skill development experiences afforded through university sport.

This stage of the research project consists of a single online questionnaire. The questionnaire is written in English; therefore, it is important that you are able to read, write, and understand English. This online questionnaire is certified safe and secure and only the investigators will have access to your information. The questionnaire should take you approximately 45 minutes to complete.

The study is being conducted in accordance with research ethics procedures at the University of Ottawa. It is important for you to understand that your involvement in the research is entirely voluntary. You are not required to participate and there will be no negative consequences if you choose not to do so. If you wish to disregard or delete this invitation, you may do so freely without penalty of any kind. If, after completion of the study, you wish to withdraw, you may do so by contacting the researchers and your information will be subsequently destroyed.

If you agree to participate, all of the information that you provide will remain completely confidential. This study is occurring at multiple Universities simultaneously, thus, data will be analyzed and reported at a group level, and collapsed across programs in order to protect the confidentiality of any one program or school. We may publish the findings from this research in the future, but all publications will pertain to data that will be analyzed at a group level. At no point will data be published or shared that includes any personally identifiable information.

All original data will be electronic in nature and will be stored using the certified-secure online survey provider "Fluid Surveys" and protected by a password required to log into the account. Any downloaded original data will be stored on a password protected computer in the supervisor's locked office for the full duration of the conservation period. Data will be conserved for 10 years, starting after the completion of the pilot study. This stage is expected to be completed by April 1, 2016 and therefore the data will be conserved until

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August 1, 2026. Following the conservation period all data will be deleted or destroyed by the research team.

There is the very slight possibility that certain questions about your experiences in university sport may cause you to feel emotionally uncomfortable. In this case, you may contact the researchers below to request information for appropriate resources (24-hour community services for counseling and concerns regarding emotional distress) to help with such discomfort.

If you have any questions about the survey or the nature of the study, please feel free to contact the primary investigator listed below.

To complete the survey, you can click on the link provided below. If you choose to complete the survey, we ask that you complete it alone. Please do not complete the survey in the presence of any other teammate or any members of your coaching staff.

https://fluidsurveys.com/surveys

Thank you for your interest in the research, your participation is appreciated.

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Appendix V

Athlete Consent Letter (Stage 4)

Dear participant,

We have received permission to ask you to consider taking part in a research study and we thank you for your interest in this research. This study is the final stage of a four stage doctoral dissertation project with the School of Human Kinetics at the University of Ottawa. Its purpose is to examine Canadian university athletes' perceptions of life skill development experiences. Through an online survey based questionnaire, athletes will be asked about their perceptions of life skill development experiences afforded through university sport.

This stage of the research project consists of a single online questionnaire. The questionnaire is written in English; therefore, it is important that you are able to read, write, and understand English. This online questionnaire is certified safe and secure and only the investigators will have access to your information. The questionnaire should take you approximately 45 minutes to complete.

The study is being conducted in accordance with research ethics procedures at the University of Ottawa. It is important for you to understand that your involvement in the research is entirely voluntary. You are not required to participate and there will be no negative consequences if you choose not to do so. If you wish to disregard or delete this invitation, you may do so freely without penalty of any kind. If, after completion of the study, you wish to withdraw, you may do so by contacting the researchers and your information will be subsequently destroyed.

If you agree to participate, all of the information that you provide will remain completely confidential. This study is occurring at multiple Universities simultaneously, thus, data will be analyzed and reported at a group level, and collapsed across programs in order to protect the confidentiality of any one program or school. We may publish the findings from this research in the future, but all publications will pertain to data that will be analyzed at a group level. At no point will data be published or shared that includes any personally identifiable information.

All original data will be electronic in nature and will be stored using the certified-secure online survey provider "Fluid Surveys" and protected by a password required to log into the account. Any downloaded original data will be stored on a password protected computer in the supervisor's locked office for the full duration of the conservation period. Data will be conserved for 10 years, starting after the completion of the pilot study. This stage is expected to be completed by April 1, 2016 and therefore the data will be conserved until

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University of Ottawa
Faculty of Health

August 1, 2026. Following the conservation period all data will be deleted or destroyed by the research team.

There is the very slight possibility that certain questions about your experiences in university sport may cause you to feel emotionally uncomfortable. In this case, you may contact the researchers below to request information for appropriate resources (24-hour community services for counseling and concerns regarding emotional distress) to help with such discomfort.

If you have any questions about the survey or the nature of the study, please feel free to contact the primary investigator listed below. If you have concerns about the content of the questionnaire or the ethical conduct of the study, you may contact the Protocol Officer for Ethics in Research as indicated below.

To complete the survey, you can click next below. If you choose to complete the survey, we ask that you complete it alone. Please do not complete the survey in the presence of any other teammate or any members of your coaching staff.

By clicking the 'Next' button below, you indicate that you freely consent to participate in this study. This means that you have been informed of the requirements of the research, understand that you have the opportunity to ask questions and discuss this study, and have been assured that your information will remain confidential. If you wish to withdraw from the study after submitting the questionnaire, please indicate to the researcher your intention to withdraw by e-mail. Your information will be removed from the study upon your request and destroyed. Please print a copy of the consent form to keep for your personal records.

[*Insert 'Next' button*]

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