The Influence of Motivational Behaviours and Goal Profiles on Positive Youth Development

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Abstract

Positive Youth Development (PYD) research has started to shift focus onto how different internal factors such as temperament, dispositions, and/or personality characteristics could influence levels of PYD for youth participating in organized sport. The purpose of this study is to examine how different goal profiles, specifically categorized by diverse levels of task and ego orientation, can influence levels of PYD in an organized youth sport setting. One hundred youth sport participants (mean age = 16.8) completed the short form Youth Experiences Survey for Sport (short form YES-S; Sullivan et al., 2013) to measure PYD, as well as the Task and Ego Orientation in Sport Questionnaire (TEOSQ; Duba 1989) to assess each athlete’s goal profile. A TwoStep Cluster Analysis was used to classify each individual’s personal goal profile into 3 statistically different cluster groupings. Results indicated significant interaction between the PYD outcome factor of Initiative vs. Clusters [\( F(2,95)= 10.86, p < 0.001, \eta^2 = 0.19 \)] as well as Goal Setting vs. Clusters [\( F(2,95)= 3.95, p < 0.05, \eta^2 = 0.08 \)]. Post-hoc analyses provided results that suggest that those athletes who are more task oriented have fostered more positive outcomes from sport, therefore having more goal setting skills and initiative.

Key Words: Positive Youth Development; Youth Sport; Goal Orientation; Goal Profile; Short-form YES-S
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CHAPTER ONE: LITERATURE REVIEW

1.1 Introduction

In the past, researchers described adolescent and youth development as a period of immense storm and stress (Hall, 1904; Holt, 2008). With past research focused on such negativity and negative outcomes, Larson (2000) investigated the source of negativity by looking at why youth seem to be suffering from such high rates of boredom and disconnection from meaningful challenges in life. Larson further investigated the idea of a high incidence of negative development, where he stated that these negative developmental deficits are not due to psychopathology or increases in negative outcomes, but instead believed to be due to an inadequate emphasis on positive outcomes and positive development (Larson, 2000).

Therefore, there was a need to start shifting new avenues of developmental psychology research towards taking a more positive perspective, as suggested by Martin Seligman who developed the concept of Positive Psychology (Lerner, 2005). Consequently there was a strong push towards developmental research that was focused on positive outcomes and positive development and because of that, the idea of positive youth development (PYD) was established. PYD contributes to a large theoretical framework that concentrates on the positive aspects of youth and adolescent development, where PYD has an outcome-based focus towards fostering positive outcomes and reducing negative maladaptations (Lerner et al., 2005b; MacDonald et al., 2012).

With PYD being focused on youth experiences and their environment, many of the theories and ideas have taken on Bronfendrenner's (1979) viewpoint of ecological
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systems theory, where each individual is exposed to a bidirectional development where they can shape their own environment as much as their own environment will shape them (Scales, 2011). From there Lerner, Freund, De Stefanis, and Habermas (2001) state that within ecological systems theory Developmental Systems Theory (DST) has become the predominant conceptual framework for adolescent development which focuses on the process of development through the plasticity of constantly changing relations between the individual and their environmental contexts. Taking the DST into account allows for a more open minded approach to researching and observing PYD and how the environments in which we put our youth will shape their development (Larson, 2000; Lerner, Almerigi, Theokas & Lerner, 2005a). Hansen and Larson (2005) stated that PYD is perpetuated by providing structured activity programs such as performance and fine arts clubs, sports, academic clubs, and community organizations. Lerner et al. (2005b) stated that in environments rich in assets such as community activity programs, the DST perspective can afford to be optimistic that positive development will occur. Organized sport in particular has been found as an ideal environment to foster healthy outcomes towards PYD (Fraser-Thomas, Côté, & Deakin, 2005).

With research on PYD gaining critical mass in Canada, researchers have now started to shift their attention to focus on how internal factors such as temperament, dispositions, and/or personality characteristics could possibly effect levels of PYD in youth participating is organized sport.

1.2 Personality

Sedgwick and Crocker (2007) define personality as distinct characteristics that add to one’s individuality. These distinct characteristics are relatively stable over time,
but can be very dynamic and adaptable to many different situations and environments (Sedgwick & Crocker, 2007). Personality research has always been a very influential topic in the field of psychology and has been ongoing for almost a century, and because of this, a large and diverse pool of research has been created. The ability to measure personality and use those measurements to predict certain life outcomes, such as health, happiness, relationship commitment and criminal behaviour, has provided researchers with strong practical implications towards developmental life outcomes (Allen, Greenless, & Jones, 2013). Sedgwick and Crocker (2007) stated that in the 1970s and 80s when researchers were first bridging the gap between the world of sport and personality research, there were heated debates arguing that personality research could not predict sport behavior due to the lack of empirical and valid personality measurement tools available at that time. Although these debates caused a downturn in sport-personality research, as both sport psychology as well as personality research progressed and gained momentum, personality research within sport began to be used in a more applied sport psychology setting to help explore how different personalities influenced sport and sport performances (Allen, Greenless, & Jones, 2013; Sedgwick, & Crocker, 2007).

1.2.1 Achievement Goal Theory. Due to how individualistic human personality is, there could be numerous areas of research that tie together personality and youth sport, but more specifically, how individual differences in personality can influence PYD. One area that has yet to be tapped into, within PYD and personality research, is motivation and more specifically motivation within Achievement Goal Theory (AGT).

Motivation is a construct that is defined as the internal and external forces that cause a person to engage in an activity (Walker, Foster, Daubert, & Nathan, 2005).
Motivation plays a pivotal role in many aspects of sport, such as driving athletes to win, to cheat or even to engage in practice, no matter how boring or punishing practice can be. “In the real world, motivation is highly valued because of its consequences: Motivation produces” (Ryan & Deci, 2000, p. 69), in a sport setting the idea of “motivation produces” would refer to situations where athletes would be successful, such as winning a competition, or improving one’s own skills. But the definition of success can be subjective; for example, what one athlete interprets as success, another athlete might consider as a failure (Walker et al., 2005). For example a 100 meter sprinter might run the best race of their life, where he/she sets a personal best, but they could still end up second place to an even faster sprinter, now some athletes could consider second place a failure, but the athlete still performed the best race of their life. This variability in how to interpret success and failure, led to the development of AGT. AGT refers to how a person’s motivational behaviour can change depending on how he/she perceives successes and failures along with how competent he/she is in demonstrating their own ability.

1.2.2 Achievement Goal Orientations. Within AGT there are two different motivational dispositions, which are referred to as achievement goal orientations; task-orientation and ego-orientation (Duda, 1989; Mack, Sabiston, McDonough, Wilson, & Paskevich, 2010). Task-orientation refers to a focus on personal growth, skill building and mastery, and a belief that success comes from effort, teamwork, and a willingness to learn (Boyd & Callaghan, 1994; Stuntz & Weiss, 2009; Mack et al., 2010). Performing personal bests and even beyond personal expectations help to improve a task oriented individual’s competence (Boyd & Callaghan, 1994; Walker et al., 2005). Ego-orientation
reflects how a person uses social comparison and outcome goals to gauge success, rather than personal performances (Boyd & Callaghan, 1994; Mack et al., 2010; Stuntz & Weiss, 2009). A person who is ego oriented believes that social status and wealth is gained from demonstrating greater ability than others, particularly when the person they are comparing themselves works harder (Boyd & Callaghan, 1994; Duda & Nichols, 1992).

Paskevich, Dorsch, McDonough, and Crocker (2007) described how there are three factors that combine to influence whether a person is in an ego or a task oriented psychological state: their developmental stage, their disposition and their motivational climate (refer to Figure 1).

**Figure 1.** Key Factors Influencing Motivated Behaviour in Achievement Goal Theory (Paskevich et al., 2007).

The developmental stage refers to the competence an athlete has to differentiate between ability and effort when assessing one’s own successes and failures (Paskevich et al., 2007). Weiss and Williams (2004) stated that as young athletes age and mature, they
begin to understand that achieving a task is often due to logical reasons such as effort and ability, rather than just luck. Paskevich et al. (2007) define dispositional achievement goals as stable cognitive perspectives that use previous experiences to influence the evaluation of specific situations. With dispositional achievement goals and personality characteristics being relatively stable over time (Sedgwick & Crocker, 2007), Paskevich et al. (2007) stated that an athlete’s disposition will bias them towards either task or ego involvement depending on the situation. The last factor discussed is motivational climate, which refers to how an athlete perceives the motivational environment that is promoted by the coach, parent, or organization (MacDonald, Côté, Eys, & Deakin, 2011).

MacDonald and colleagues describe two main motivational climates; the first is a task climate, which is an environment that emphasizes personal skill development which is more focused on encouraging effort regardless of performance. Whereas the second is referred to as an ego climate where coaches promote social comparison to other opponents with an emphasis on showing superior skill and ability over others (MacDonald et al., 2011). Paskevich et al. (2007) state that when combining these influencing factors, motivational climate, disposition and developmental stage, an athlete will exhibit a specific ego or a task involvement. With a number of different factors that can alter an athlete’s psychological state, many different motivated behaviours can be observed within AGT, therefore a quantitative measurement tool must be used to delineate whether a person is task and/or ego involved.

In order to quantitatively assess a person’s motivational orientation, Duda (1989) developed a questionnaire referred to as the Task and Ego Orientation in Sport Questionnaire (TEOSQ). Since the inception of the TEOSQ as a measurement tool for
AGT, many studies have tested and retested both the reliability and validity of the two-dimensional factor structure within the TEOSQ, with the findings providing evidence of strong reliability and validity (Castillo et al., 2010). The configuration of the TEOSQ has held up well in many different countries across the world such as Greece, China, Spain, and the United Kingdom, as well as including a variety of populations with different ages (Castillo et al., 2010).

1.2.3 Achievement Goal Profiles. If an athlete has been observed to be high in ego-orientation on the TEOSQ, it does not mean they are only ego oriented (Mack et al., 2010). Originally, within a sport setting, task and ego orientations were perceived and measured as orthogonal constructs (Kuan & Roy, 2007). However, the concept of the two orientations being completely independent was seen as too rigid, and researchers began to introduce the concept of goal profiling which now includes the idea of interactions between both task and ego orientations (Kuan & Roy, 2007; Nicholls, 1989). This lead to a four goal profile structure: high task/high ego, low task/low ego, high task/low ego, and low task/high ego (Cumming, Hall, Harwood & Gammage, 2002; Kuan & Roy, 2007; Sit & Lindner, 2007). Additionally, Hodge and Petlichkoff (2000) stated that when interpreting the results of the TEOSQ, having goal profile categories that are only considering high or low scores is still too extreme because it leads researchers to use a mean or median split method to categorize their athletes into either the high or the low orientation category (Duda, 1989). This excludes athletes with moderate/average scores from participation and also eliminates all of the possibilities to interpret those important scores (Hodge & Petlichkoff, 2000). Hodge and Petlichkoff (2000) suggest that with the mean or median split method not reflecting any average or moderate scores in both the
task and ego orientation category, cluster analysis should be used to allow for a truer representation of each of the athlete’s scores. This technique is used in order to categorize participant into similar clusters based on a set of selected characteristics; the resulting clusters have strong homogeneity within groups as well as strong heterogeneity between groups (Hair, Black, Babin, Anderson, & Tatham, 2006). “An advantage of using cluster analysis is that it will provide the researcher with the opportunity to examine different solutions and then select the solution that best fits the data” (Cumming et al, 2002, pg. 28).

1.2.4 Behavioural Outcomes due to Motivational Orientation. Paskevich et al. (2007) has suggested (see Figure 1) that an athlete’s developmental stage, disposition and motivational climate can influence their psychological state of achievement goal orientation. Furthermore these psychological states then progress to influence the outcomes of an athlete’s motivational behaviours. Previous sport psychology research on AGT has observed how varying levels of both task and ego involvement, either as clustered goal profiles or separate goal orientations, can affect how an athlete behaves before, during and after playing sports.

1.2.4.1 Task Orientation. Task orientation refers to an athlete who has reported higher scores in the task-orientation category of the TEOSQ. If an athlete is referred to as solely task oriented, the athletes will have reported high levels in the task-orientation category and low levels in the ego-orientation category (Duda, 1989). This observed difference between orientation categories leads to different behavioural outcomes. Researchers have shown that task-orientation has been associated with greater enjoyment of sports and higher levels of intrinsic motivation (Mack et al., 2010; Paskevich, et al.,
Boyd and Callaghan (1994) suggested that high task-orientation leads to a greater belief that effort results in success, as well as a greater association to mastery, and cooperation (Biddle, Wang, Kavussanu, & Spray, 2003). Sit and Lindner (2007) state that when an athlete has higher levels of task-orientation they tend to act more sportsperson-like and refrain from cheating. Finally, in relation to participation, athletes with high task-orientation has been found to have increased effort and intentions to continue to participate in sport (Mack et al., 2010; Sit & Lindner, 2007), which is pivotal when discussing how young athletes can positively develop through participation in sport.

1.2.4.2 Ego Orientation. Similarly to task-orientation, an ego oriented athlete who is referred to as exclusively ego oriented would have measured higher in the ego-orientation category and lower in the task-orientation category (Duda, 1989). Previously, researchers held the view that when looking at ego-orientation independently, separate from task-orientation, motivated behaviours tended to be more negative and detrimental (Cumming et al, 2002). In relation to success, athletes who are highly ego oriented believe that their successes are due to their own abilities and skills rather than the amount of effort they needed to put forth (Boyd & Callaghan, 1994). These beliefs can be unfavourable, because when combined with a loss or an unsuccessful sports event, athletes will begin to use social comparison and create a cycle of negatively assessing their own skills and abilities (Biddle et al., 2003; Boyd & Callaghan, 1994). Dunn, Causgrove Dunn, and Sytotuik (2002) suggested that athletes with high ego-orientation have greater associations with mal-adaptive perfectionism, where athletes are highly concerned about making mistakes as well as criticism from peers, coaches and family members. When referring to sportsperson-like behaviour for high ego-orientation, Biddle
et al. (2003) found that ego oriented athletes tend to elicit more unsportsperson-like behaviours, such as intent to injure, not following the rules and intentional cheating as compared to those athletes who are predominantly task oriented. Unfortunately, athletes who have high levels of ego-orientation display lower effort to continue with participation in sport (Mack et al., 2010), which can be an issue, especially for positive youth development research which strongly emphasizes the continuation of participation.

1.2.4.3 Task and Ego Orientation. When looking at previous research it would be difficult to discuss task and ego orientation as completely separate and independent of each other. Cumming et al. (2002) stated that the ability to sort athlete’s TEOSQ scores into more realistic goal profiles has allowed for a more accurate observation of behavioural differences where task and ego orientations interact. With these goal profiles allocating for interactions of various levels of task and ego orientation, having high scores in both task and ego-orientation can be seen as healthy (Boyd & Callaghan, 1994; Mack et al., 2010; Stuntz & Weiss, 2009). Sit and Lindner (2007) suggested that athletes with a profile that is high in task and moderate in ego-orientation have more problem solving skills and use specific sport psychology techniques like positive self-talk and imagery to help their athletic performances, as compared to those athletes whose profile is low to moderate task and high ego oriented. Results from the Sit and Lindner (2007) study showed that athletes with high task and high ego-orientation, as well as athletes with high task and low ego-orientation have high levels of intrinsic motivation towards sports, showing more excitement, skill development and fitness. They also found that athletes in the high task high ego-orientation group yielded strong responses to both intrinsic and extrinsic motivations, which shows that the high task, high ego-orientation
group elicited the most positive and adaptive motivational behaviours (Sit & Lindner, 2007). These findings were consistent with the Cumming et al. (2002) study which also showed that athletes who demonstrated a combination of both high task and ego-orientation had the most adaptive motivational behaviours, which can be greatly conducive to a sport setting. “The consistent beneficial outcomes associated with a high task-orientation (alone or in combination high ego-orientation) have varied instructional implications for physical education teachers and coaches that emphasize an environment conducive to mastery performance” (Mack et al., 2010, p. 98). With that being said there is a need to begin evaluating how different levels of both motivation orientations can influence PYD in an organized sport setting.

1.3 Positive Youth Development

PYD is a framework that is geared towards the observation and measurement of positive developmental outcomes, such as personal and social skills, cognitive skills and goal setting. In order for researchers to observe and to tease out the antecedents of these positive outcomes, many of the fields within psychology should be examined. In Section 1.2, personality and different achievement goal profiles were discussed, using the model proposed by Paskevich et al. (2007), which explains how motivated behaviours can change depending on one’s own psychological state, disposition, developmental stage, and motivational climate. Furthermore, the two main psychological states discussed by Paskevich et al. (2007), task involvement and ego involvement, have provided a good platform to observe how different levels of task or ego involvement could alter one’s achievement goal profiles, which could then lead to differences in motivated behaviours and more particular differences in positive youth development outcomes.
With aspects of adolescent development shifting to focus on a more positive perspective, researchers began to categorize the positive outcomes present within the PYD framework (Jones, Dunn, Holt, Sullivan, & Bloom, 2011). Early PYD research was strongly rooted in qualitative measurement and analysis due to the complicated nature of attempting to measure how youth positively developed. Therefore, there was a noticeable need to create a quantitative observation and measurement tool for PYD. From there researchers began to work towards taking many of the broad facets of PYD and create a reliable and valid quantitative measurement tool. With that being said, there was three different group of researchers that almost simultaneously attempted to create their own PYD measurement tool, Benson and colleagues at the Search Institute with the *Profiles of Student Life: Attitudes and Behaviors*, Lerner and colleagues with *the 5 C’s*, and Larson and colleagues with the *Youth Experience Survey*.

1.3.1 Measuring PYD through Developmental Assets. Benson, Scales, Leffert, and Roehlkepartain (1999) posit that one of the first quantitative analysis tools formed to assess PYD was the *Profiles of Student Life: Attitudes and Behaviors*, which assessed PYD on a framework of 40 developmental assets that help youth interact in society in a healthy and positive manner. All 40 assets are divided into two main groups, 20 internal assets and 20 external assets. Each group is then subdivided into four categories, within internal: commitment to learning, positive values, social competencies and positive identity, within external: support, empowerment, boundaries and expectations, and constructive use of time. Scales (2011) state that the developmental assets can be used to measure the experiences, opportunities, relationships, values and skills youth need for healthy development to thrive in the community and society. Fraser-Thomas, Côté, and
MacDonald (2010) state that despite having strong empirical evidence for how youth positively develop, there is still lack of support for being able to measure developmental assets in a sport specific setting.

**1.3.2 Measuring PYD through The 5 C’s.** With some researchers questioning how succinct the *Profiles of Student Life: Attitudes and Behaviors* is, considering that having to keep track of 40 separate developmental assets in order to quantitatively measure PYD was not concise enough (Lerner, Fisher, & Weinberg, 2000). Researchers worked towards creating a more simplified framework to categorize the potential outcomes within positive youth development. Lerner, Fisher, and Weinberg (2000) created *the 5 C’s* of Positive Youth Development in order to have a more concise outcome based model to evaluate PYD. With a strong emphasis on the positive aspects of development being accounted for within PYD, Lerner and colleagues further built upon Little’s (1993) research that categorized the mental, behavioural, and social elements that are within PYD into a set of five desired outcomes. These five outcomes, also known as *the 5 C’s* are competence, confidence, connection, character and caring.

Lerner et al. (2005b) describe *the 5 C’s* as follows:

Competence is the positive view of one’s social, academic, cognitive, and vocational skills. Confidence is observed through a strong sense of positive self-worth and self-efficacy. Connection refers to the positive relationships that are formed through interactions with family, peers or other individuals, in settings such as the home, schools, and/or the community, in which both parties contribute to the relationship. Character pertains to having respect for societal and cultural
rules, having a sense of right and wrong. Lastly caring refers to having a sense of sympathy and empathy for others. (pp. 23).

Lerner et al. (2005b) stated that if a youth or adolescent experiences an increase in any or all of the C’s, PYD will increase, showing that any environment that is geared to help increase any or all of the 5 C’s will help to influence PYD.

Building on Lerner and colleagues previous research, Phelps, Zimmerman, Warren, Jeličić, von Eye and Lerner (2009) created a 78-item quantitative measurement tool that assessed PYD on the five constructs built into the 5 C’s. Although Phelps and colleagues stated that they created a valid measurement tool for PYD, they failed to report the inter-factor correlations that were associated with their model, which Jones et al. (2011) suggested to be crucial in reporting any measurement overlap of the 5 C’s constructs.

1.3.2.1 Criticisms of the 5 C’s. Jones et al. (2011) suggested there was a lack of empirical evidence supporting Lerner and colleague’s 5 C’s model, and that it cannot be integrated into a sport specific environment due to, and more specifically a youth sport setting. Their findings explained that the suggested 5 C’s had statistically significant similarities; caring and compassion were found to be similar as well as confidence and competence, therefore losing the ability to consider each of the 5 C’s as separate constructs to measure PYD (Jones et al., 2011). While reviewing the state of PYD research in 2011, Holt and Neely (2011) also stated that the 5 C’s lacked empirical validity, and that there were numerous studies that provided similar findings that each of the five components were not uniquely identifiable (Côté & Gilbert, 2009; Vella, Oades,
Thus, the 5 C’s model became less viable to measure PYD, thus creating the need for another quantitative analysis model for PYD.

1.3.3 Measuring PYD through the Youth Experiences Survey. While concurrently trying to measure PYD quantitatively, Hansen, Larson, and Dworkin (2003) created a questionnaire called the Youth Experiences Survey (YES) that assesses PYD using a series of Likert scale questions. The YES helps to funnel eighteen different positive outcomes from youth development programs into six conceptual domains: Initiative, Interpersonal Relationships, Adult Networks, Teamwork and Social Skills, along with five negative measurement scales channeled into one domain responsible for negative experiences. Hansen and Larsen further refined the YES into the Youth Experiences Survey 2.0 (YES 2.0) which was revised to be shorter than the original YES but had much stronger evidence of reliability and validity (Hansen and Larson, 2005).

With the YES 2.0 having a strong empirical background, research progressed to quantitatively assess which structured programs and activities helped to promote more PYD. Larson, Hansen, and Moneta (2006) tested the YES 2.0 across 3 different program-based activities, faith-based activities, performance and fine arts, and sports, on 2280 young participants. They found that the sports and arts programs provided the most beneficial PYD outcomes (Larson, Hansen, & Moneta, 2006). While sports did yield slightly higher number of positive outcomes, as compared to art programs, Larson et al. (2006) also stated that it is important to note that sport provide some increases in negative experiences due to the high stress situations that are incorporated into the sporting environment.
With the evidence provided by Larson, Hansen and Moneta (2006), MacDonald, Côté, Eys, and Deakin (2012) took the YES 2.0 and condensed it into a shorter more sport specific measurement tool called the Youth Experience Survey for Sport (YES-S). The YES-S measures PYD with a 5 factor model, including 4 positive factors: Personal and Social Skills, Cognitive Skills, Goal Setting, Initiative, and 1 negative factor: Negative Experiences.

The personal and social skills factor refers to when a coach and/or an organization provides a positive and healthy environment for the young athletes who participate in organized sport and physical activity (Hellison, 2003). MacDonald et al. (2012) stated that as athletes play sport they interact with other members of the community such as peers, competitors, coaches and even referees; these interactions allow the athletes to learn how to integrate into a community or team environment depending on the sport being played, with the hope of transferring these skills to life outside of sport. These young athletes build a source of self-efficacy through vicarious experiences by often modeling their behaviours around what they see from their coaches and instructors (MacDonald et al., 2012); therefore they have the opportunity to gain skills on how to be personally and socially responsible.

The cognitive skills factor is based around observing increases in academic performance and creativity for those who participate in sport (Eccles & Barber, 1999). MacDonald et al. (2012) stated that even though sport is mainly physical in nature, cognitive skills can be developed as well; creativity and inventiveness are often tapped into while playing sports that are open to strategizing and forming tactics to overcome barriers or opponents. Some increases to cognitive skills may also be explained by
athletes developing time management skills by retaining a well-balanced schedule of academic work and sport (MacDonald et al., 2012).

The goal setting factor refers to how the goal setting skills that are developed during sport can easily transfer to everyday life (Burton & Weiss, 2008). “Goal setting is the process by which people establish desirable objectives for their performance and achievements” (McCarthy, Jones, Harwood, & Olivier, 2010, p. 162). MacDonald et al. (2012) stated that sport can be an ideal environment for developing goal setting skills. Within a sport atmosphere goal setting can be a very simple, specific and obvious task that occurs due to the cut and dry nature of the consequence of sport, a win or loss (MacDonald et al., 2012). Therefore, young athletes can take the goal setting skills learned from sport and apply them to school or even a part-time job, where performance can be improved upon by setting short term goals and putting forth effort towards attaining those goals (MacDonald et al., 2012).

Initiative is a factor that is structured around intrinsic motivation and how those who participate in sport often participate due to a love and appreciation for playing that sport (Larson, 2000). Initiative is defined as the intrinsically motivated effort and attention put into attaining one’s goals, those who have developed higher levels of initiative tend to use better critical thinking and knowledge searching skills which speaks to the idea of having a strong language of agency (MacDonald et al., 2012). Initiative is another skill that is highly transferable from sport to everyday life, MacDonald et al. (2012) explains that those youth who participate in sport and have continued their participation for many years have allowed initiative to develop by satisfying the conditions of concentration and motivation.
Lastly the negative experiences factor attempts to cover a large group of the negative experiences that can happen in a sporting environment. The YES-S takes the five different negative experiences factors from the YES 2.0 and condenses it down into one concise factor. MacDonald et al. (2012) described the negative experiences factor within the YES-S measures experiences such as alcohol consumption and drug use, manipulative and controlling behaviors from adults/coaches, sexist, racist, prejudice and morally wrong behaviours. Even though MacDonald and colleagues condensed down the negative experiences factor it still has the stability and flexibility to cover the entire span of the negative experiences that were measured in the YES 2.0.

In addition to the results of MacDonald and colleagues, Sullivan, LaForge-MacKenzie, and Marini (2013) further developed the 5 factor structure of the YES-S into a new shorter version referred to as the short-form YES-S. Using confirmatory factor analysis the 5 factors of the short-form YES-S yielded excellent psychometric properties while retaining the same structural conceptualization of the YES-S as well as reducing the number of items being assessed from 37 down to 22. This reduction in measureable items while still retaining strong CFA results, had strong research implications due to the target population for PYD research in sport being young athletes between the ages of 13 and 18, where sometimes attention can be limited and a shorter scale would hopefully mean participants will be attentive and devote their attention to completing the questionnaire.

1.3.4 PYD in Sport. Canada has many specific programs and organizations that help to foster PYD such as the YMCA, Scouts Canada, Girl Guides and the Catholic Youth Organization. These programs can promote well-being, help reduce boredom and
provide a sense of organization or routine by allowing those youth who participate to focus on attending their weekly scheduled programs (Hansen & Larson, 2005). When trying to decipher which organized activities and programs were found to be the most beneficial for youth, studies have found that sport yielded the best results (Eccles & Barber, 1999; Fraser-Thomas, Côté, & Deakin, 2005; Lerner et al., 2005a). Those who participated in sport reported higher levels of concentration and intrinsic motivation, as compared to those enrolled in other organized activities or programs (Csikszentmihalyi & Larson, 1984), higher academic achievement (Broh, 2002), lower school dropout rates, and lower delinquency rates (Wilkes & Côté, 2010). With that being said, some research has found negative outcomes from sport participation. Eccles and Barber (1999) stated that those who participate in team sports yielded higher levels of negative outcomes in relation to increased levels of alcohol consumption as well as slightly higher numbers in marijuana use, as compared to the youth participating in performing arts, academic clubs, and prosocial activities.

1.3.4.1 Participation in Sport. While considering both the positives and negative outcomes, another aspect that shows the benefits of sport is the sheer participation levels when comparing to other organized activities and organizations; “sport is the most popular organized activity in which youth engage” (Holt, 2008). A recent independently published study referred to as the Canadian Youth Sport Report has stated that 84% of children and youths between the ages of 3-17 participate in some form of sport, and 60% participate in organized sport (Solutions Research Group Consultants Inc, 2014). Considering that in 2005 Statistics Canada found a statistically significant decrease in sport participation rates, 51% down from a previous 57%, for young people (Statistics
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Canada, 2014), this reported increase to 60% is seen as a positive. With this optimistic upturn in youth participation, one of the main benefits for adolescents and youths participating in sport and more specifically, organized sport, is the development and/or maintenance of a healthy lifestyle (Dawes, Vest, & Simpkins, 2013).

1.3.4.2 Organized Sport. In organized sport, one of the major factors that helps to promote PYD is the relationships that are created (Lerner et al., 2005a), such as the relationships between athlete-coach, athlete-parent and, of course, athlete-athlete. With constant interactions among the athlete, coach or parent, these relationships are often mutually beneficial which allows both parties to grow and learn, which is an ideal environment for PYD. Therefore these healthy relationships that are formed fit with Brandstädter’s idea of adaptive developmental regulations where both parties in the relationship strive to make beneficial contributions to themselves, their family, the community and society (Lerner et al., 2005). As the cycle of participation in sport continues, the positive experiences that these youth will hopefully have will help to increase positive outcomes, which could lead to increases in PYD. It is these increases in PYD that will perpetuate positive growth and maturation that will one day help to influence participation for future coaches or the parents of new athletes (Lerner, Dowling, & Anderson, 2003). This finding has led to the emergence of a “6th C” of PYD, contribution (Lerner, Dowling, & Anderson, 2003), but as discussed above the 5 C’s even with the inclusion of the “6th C” of contribution has still lost favour due to inconsistencies with the factor structures (Holt & Neely, 2011).

1.3.5 PYD and Differences within Sport. With organized sport being the most popular form of extracurricular activities in which youth are involved (Holt, 2008), and
many sport psychologists realizing this, there was a need to begin looking at if PYD occurs differently within sport (Jones et al., 2011). Broh (2002) stated that when looking at different youth sports and sports organizations, not all these sport programs impact PYD in the same manner; “the nature of different sports varies, and the characteristics of those sports differ, other factors may be considered enjoyable that are unique to that particular environment” (Wiersma, 2001, p. 174). Therefore there is a need to start fleshing out how certain differences in sports can uniquely impact PYD, and more specifically trying to find out what those unique differences are.

1.3.5.1 Competition Level. With such a variety of different youth sports and sports programs available today (Solutions Research Group Consultants Inc, 2014), it has become necessary to have multiple levels of competition within each sport in order to accommodate the athletes that are in different sport participation stages. One possible factor that could uniquely impact PYD within sport is different competition levels (Jones et al., 2011). Sullivan and Marini (2015) have found that when looking at the PYD differences between different competitive levels, as defined by the NCCP, those athletes in the competitive stream have shown higher levels of the PYD outcome factors of Cognitive Skills and Goal Setting, than those in recreational sport. These differences could be related to how competitive athletes value cognitive skills and goal setting in order for them to compete at high levels (Burton & Weiss, 2008; Eccles & Barber, 1999).

It is also important to note that relationships such as the coach-athlete relationship can be extremely different depending on the athlete, the sport or even the competition level. Broh (2002) has shown that students who play sports for their high-school teams were more likely than house league and community level athletes, to talk with their
teachers outside of class, because those teachers are often their coaches. Broh (2002) proposed that those athletes who participated in high school sports may have more access to form relationships with teachers due to the more intensive nature of their sporting environment, and the social bond that is created through sport motivates the young athletes to perform better in the classroom as to not disappoint their teacher/coach.

1.3.5.2 Gender. Gender differences across organized youth sport is often a topic of discussion due to the natural separation of gender that occurs in most sport organizations, “given that organized sports are traditionally a sex-segregated environment and, therefore, even for the same type of sport, the female and male teams may differ considerably across a wide range of factors” (Agans & Geldhof, 2012, p. 161). When looking at only female athletes between grades 10 and 12, Agans and Geldhof (2012) showed that females who participate in either a team or individual sport experienced higher levels of PYD when compared to those females who did not participate in any sports. For male athletes, only the younger males in grade 10 who participated in either a team and individual sport experienced higher levels of PYD that those males who did not participate in any sports (Agans & Geldhof, 2012). Researchers have also indicated that male and female athletes may acquire different amounts of recognition for their athletic accomplishments and therefore develop different growth experiences (Wilkes & Côté, 2010). For instance, female athletes who attended a private sports academy found that the majority of participants believed that they did not receive the same recognition for their athletic accomplishments, from their school or community, as their male counterparts; this can be seen as a negative outcome and could possibly lead to negative repercussions for female athletes (Wilkes & Côté, 2010).
1.3.5.3 Coaching. As discussed above, the relationships that are formed in a sporting environment can be crucial to the development of young athletes. With sport involving such a variety of different interactions with other people, there are many possible relationships that can be formed. One of the most important relationships that can formed is between the athlete and coach, the coach is often scene as a mentor and role model that is present to help teach and guide athletes on and off the playing surface (MacDonald et al., 2012). Due to how early these relationships are established and the amount of interactions between each party in the relationship. Camiré, Forneris, Trudel, and Bernard (2011) suggest that coaches who hold regular one on one meetings with their athletes during their season, increase the opportunities to give constructive feedback and to discuss various problems both not sport related and sport related. This often creates strong relationships where both have a mutual respect for each other. Flett, Gould, Griffes, and Lauer (2013) suggested that coaches who use positive coaching behaviours such as: intentionally trying to transfer skills from sport to life, supporting and building players’ esteem, and creating a fun environment, were found to be more effective coaches, specifically for youth development. Flett and colleagues also describe that coaches who were found to be less effective often described the world as a tough place, with a pessimistic point of view that emphasized the difficulties of adult life. This type of coaching was considered as not developmentally sensitive, thus showing the developmental importance of positive coaching behaviors (Flett et al, 2013). Vella, Oades, and Crowe (2011) stated that in sport the coach is often involved as both a coach and a teacher, where coaches can use mistakes made, or problems that occur while
playing, as teachable moments that help to facilitate problem solving and critical thinking, two pivotal factors of PYD both within and outside of the sporting environment.

1.4 Summary

With the diversity of sporting environments available, especially in Canada, for those youth willing to participate, there can be numerous factors present or even not present within sport that could influence positive youth development. As MacDonald et al. (2011) have suggested there is a need to study the impact that motivation and motivational climates can have on the personal development of young athletes. AGT provides the ability to assess and categorize an athlete’s specific motivational behaviours within a sports environment. These motivational behaviours can be categorized into two different motivational orientations, task-orientation and ego-orientation that were once seen as orthogonal and independent but can now be viewed in a way that allows for interactions between the two orientations to be interpreted via cluster analysis. This new interpretation in AGT allows the cluster analysis to produce a set of goal profiles that allows for the most accurate representation of a person’s task and ego orientations. With more accurate goal profiles, a newly supported quantitative measurement tool for PYD, the short-form YES-S, and sport psychology researchers now focusing on how PYD can be influenced by personality, a large area of research is now present and waiting to be tapped into.
CHAPTER TWO: RATIONALE, PURPOSE, & HYPOTHESIS

2.1 Rationale

Lerner et al. (2005b) stated that PYD is a large theoretical framework that concentrates on fostering positive developmental outcomes as well as reducing negative outcomes. Numerous studies have provided evidence that explains that the most influential program based activity to help foster PYD is organized sport (Eccles & Barber, 1999; Fraser-Thomas, Côté, & Deakin, 2005; Lerner et al., 2005a). Recent research has been focused on developing a valid and reliable quantitative measurement tool for PYD specifically within a sport setting. Sullivan et al. (2013) further built upon the research of MacDonald et al. (2012) using exploratory factor analysis as well as confirmatory factor analysis to provide a condensed version of the YES 2.0 that can be used in a sport specific setting, which is referred to as the short form YES-S. With the recent creation of the short form YES-S the field of youth development in sport psychology has been opened up to start investigating a multitude of factors that can influence PYD levels. Therefore, there is a need to begin directing PYD research on a more developmental, athlete-centered perspective that focuses on personality characteristics and disposition, instead of specific environmental factors (Agans & Geldho, 2012).

Ryan and Deci (2000) stated that in a sport setting, motivation is one of the most highly valued personality characteristics because of the influence motivation has towards success and failure. An example would be that high levels of motivation can produce success and/or winning, and low levels of motivation can produce failure and/or losing. Having the knowledge of the consequences that occur from winning or losing can have a
major impact on an athlete’s motivation and often shape the way each athlete’s achievement goal orientations are developed within the conceptualization of Achievement Goal Theory (Duda, 1989). Task-orientations arise when an athlete is strongly competent of their own skills and abilities, which allows them to relate their success to the amount of effort they put forth. A person who is task oriented perceives sport and competition as opportunities to master their skills (Mack et al., 2010). Ego-orientation occurs when an athlete assesses their own abilities and skills through social comparison, with successes coming from outperforming others, rather than playing to their own maximum potential (Mack et al., 2010).

With the TEOSQ measuring both goal orientations, if an athlete has measured high in ego-orientation, it does not necessarily mean they are categorized into being only ego-oriented. The ability to create goal profiles for each individual athlete (i.e., using cluster analysis) can help to group individuals into specific categories depending on their measured levels of task and ego orientations (Hodge & Petlichkoff, 2000). It is important to note that Mack et al. (2010), in combination with Biddle et al. (2003), stated that task-orientation often results in characteristics that have more positive connotations, whereas ego-orientation results in characteristics that are more negative. Therefore, the already positive nature of task-orientation could shed insight towards predictions of task oriented athletes having higher levels of PYD rather than ego oriented athletes.

With PYD research now shifting from interpreting environmental factors towards a more athlete centered approach, more insight needs to be provided to help understand how personality factors can influence levels of PYD. Targeting AGT by using the
TEOSQ in combination with the short-form YES-S will provide the ability to analyze if achievement goal orientation influences PYD levels.

The combination of assessing the motivational goals of athletes, as well as how they positively develop throughout their time participating in sport, will help to provide greater understanding for how a person’s individuality can influence how they experience sport and how they interpret their time within a sport environment. This study will aim to investigate how a certain personality characteristic, in this case a spectrum of motivational behaviours that fall within specific goal profiles, can influence how they develop positively through sport. Therefore, this study has important implications in terms of understanding how motivation and different motivational behaviours can influence the development of positive outcomes for young athletes.

2.2 Purpose Statement

The purpose of this study is to examine how different goal profiles, specifically categorized by diverse levels of task and ego-orientation, can influence levels of PYD in an organized youth sport setting.

2.3 Specific Objective

1. To examine if different clusters of achievement goal orientation affect PYD outcomes in young athletes.

2.4 Hypotheses

1. It is hypothesized that:

   Athletes with goal profiles of high levels of task-orientation and low levels of ego-orientation will have higher levels of the four positive outcome factors on the short-form YES-S, along with the possibility of lower levels of the one
negative outcome factor, when compared to those athletes with low levels of task-orientation.

Rationale: Biddle et al. (2003) suggested that high levels task-orientation often results in characteristics that have more positive connotations. Researchers have shown that task-orientation has been associated with greater enjoyment of sport and higher levels of intrinsic motivation (Mack et al., 2010; Paskevich et al., 2007). Sit and Lindner (2007) state that an athlete reports higher levels of task-orientation tend to act more sportsperson-like and refrain from cheating. Therefore, higher levels of enjoyment, intrinsic motivation and sportsperson-like behaviour would suggest that the four positive factors of the short-form YES-S should see higher levels.

2. It is hypothesized that:

Goal profiles with low levels of task-orientation and high levels of ego-orientation will lead to higher levels of the negative outcome factor on the short-form YES-S, with no differences in the levels of the four positive outcome factors, as compared to those athletes with high levels of task-orientation and low levels of ego-orientation.

Rationale: Researchers held the view that when looking at ego-orientation independently, separate from task-orientation, motivated behaviours tended to be more negative and detrimental (Cumming et al, 2002). Ego-orientation can produce behaviours that are seen as unfavourable, because when combined with a loss or an unsuccessful sports event, athletes will begin to use social comparison and create a cycle of negatively assessing their own skills and abilities (Biddle et
Dunnet al. (2002) suggested that athletes with high ego-orientation have provided evidence of greater associations with maladaptive perfectionism. When referring to sportperson-like behaviour for high ego-orientation, Biddle et al. (2003) has found that athletes tend to elicit more unsportperson-like behaviours than those athletes who have lower levels of ego-orientation. These findings suggest that athletes with high levels of ego-orientation would score higher on the negative outcome factor in the short-form YES-S.

3. It is hypothesized that:

   Goal profiles with high levels of task-orientation and high levels of ego-orientation will lead to higher levels of the four positive outcome factors on the short-form YES-S, as well as higher levels of the negative outcome factor, as compared to those athletes with low levels of both task and ego-orientation.

*Rationale:* Having high scores in both task and ego-orientation can be seen as healthy (Boyd & Callaghan, 1994; Stuntz & Weiss, 2009). Sit and Lindner (2007) suggest that athletes with a profile that is high in task and high to moderate ego-orientation have more problem solving skills as compared to those athletes whose goal profile is low to moderate task and high ego-orientation. Athletes in the high task high ego-orientation group measured high in both intrinsic and extrinsic motivations, which shows that the high task, high ego-orientation group elicited the most positive and adaptive motivational behaviours (Sit & Lindner, 2007). This was consistent with the Cumming et al. (2002) study which also found that
athletes who demonstrated a combination of both high task and ego-orientation have the most adaptive motivational behaviours, which can be greatly conducive to a sport setting. These findings suggest that many of the positive factors and influences of both task and ego-orientation combine to often outweigh the negative, but in regards to the short-form YES-S this type of goal profile will measures higher in all four of the positive outcome factors as well as the one negative outcome factor.
CHAPTER THREE: METHODOLOGY

3.1 Participants

One hundred youth sports participants were recruited from various youth sports teams around St. Catharines. Participants included both male \( N = 67 \) and females \( N = 33 \) between the ages 13 and 18 \( M = 16.8, SD = 0.88 \). Participants were mainly from: volleyball, rugby and soccer. Hair et al. (2006) stated that when using cluster analysis there is no set rule for sample size, and that the primary direction for setting a sample size is to have enough participants to sufficiently represent each group in the cluster analysis. Studies using cluster analysis to provide goal profiles on the TEOSQ scores such as Cumming et al. (2002) who used 106 participants as well as Duff-Riddell and Louw (2011) who used 83 participants, both of which provided strong homogeneity between goal profiles as well as strong heterogeneity within goal profile clusters. Two participants did not provide any results for the TEOSQ, therefore the final sample size was ninety-eight \( N = 98 \), males \( N = 65 \) and females \( N = 33 \), and those two participants were not included in the cluster analysis or the MANOVA.

The main exclusion criteria was age; any participant who was not between the age of 13 to 18 were not be included and/or asked to participate, the rationale for this was to stay consistent with the ages used in previous PYD studies. MacDonald et al. (2011) as well as Sullivan et al. (2013) both used the age range of 13 to 18 which helps provide a consistent age as well as a consistent definition for youth athletes.

3.2 Procedure

Participants were recruited through email. At first I emailed the administrators of the sport organizations (see Appendix A). This email explained the purpose of the study
and what was needed in order for the organizations athletes to participate. Upon receiving their permission, another email (see Appendix B) was sent to the coaches in their organization. Once communication with the coaches had started, meetings were set up in order to have face to face time with the athletes. The time spent with the athletes was used to explain the study and to hand out the envelopes with all of the necessary forms and questionnaires inside. Participants were reminded to answer all questions truthfully. All responses were kept confidential and participants were never told how to respond to the questions. Participants under the age 16 who had their parents present at the meetings had the opportunity to read over the consent form with their parents/guardians and with their agreement, were asked complete the required consent form and proceeded to fill out all of the forms and questionnaires. Participants under the age of 16 who did not have their parents/guardians present had to take the envelopes home to fill out the consent forms and then complete each questionnaire. If those athletes chose to consent, they brought the envelope to their next practice or scheduled meeting with their consent forms signed and questionnaires completed and then all of the envelopes were collected.

3.3 Dependent Measures

Participants were asked to complete a series of questionnaires assessing the following information (see appendix for all questionnaires):

3.3.1 Demographic Variables. First, age and gender were reported through self-report. Along with three other demographic questions assessing sport specific questions such as primary sport played, duration of primary sport played, as well as length of time, in years, spent with that team, club or organization.
3.3.2 The short-form Youth Experiential Survey for Sport (the short-form YES-S). This 22 item scale was developed by Sullivan et al. (2013) to measure PYD on a 5 factor model with 4 positive factors: Personal and Social Skills, Cognitive Skills, Goal Setting, Initiative, and 1 negative factor: Negative Experiences. Items are measured on a 4-point scale from 1 (Not a lot) to 4 (Yes, definitely). Examples of items include “I learned that working together requires some compromising”, “I learned to focus my attention” and a negative factor question “Adult leaders make personal comments that I find upsetting”. MacDonald et al. (2011) provided strong exploratory analysis; data as well, Sullivan et al. (2013) provided strong confirmatory factor analysis data. All five factors have shown a Cronbach’s alpha of greater than 0.8, the short-form YES-S has been shown to provide adequate reliability for use with youth athletes.

3.3.3 The Task and Ego Orientation in Sport Questionnaire (TEOSQ). This 13 item scale was developed by Duda (1989) to measure an athlete’s definition of success in a sporting context as task and/or ego orientated. Seven questions measure the task-orientation factor and 6 items measure the ego-orientation factor. Answers were measured on a 5-point scale from 1 (Strongly Disagree) to 5 (Strongly Agree). Examples of items include “I learn a new skill and it makes me want to practice more” and “I am the only one who can do the play or skill”. The configuration of the TEOSQ has provided strong reliability and validity across variety of populations with different ages (Castillo et al., 2010), “In addition, psychometric tests involving samples of youth sport and high school and college age sport participants and nonparticipants have provided construct and factorial validity, as well as internal consistency reliability” (Li & Harmer 1996, p. 229).
3.4 Data Analysis

First a two-step cluster analysis was completed, as outlined by Norušis (2012). A two-step cluster analysis uses a clustering algorithm based on a set of distance measures that give the best results if the variables are independent, continuous, and normally distributed, although the two-step cluster analysis has been found to be statistically stable even when the assumptions are not met (Norušis, 2012). Step one within the Two-Step cluster analysis is to form preclusters that have the smallest distances between all possible pairs of cases, then step two uses a hierarchical clustering algorithm on the preclusters to from the groups based on the best fit to the data as possible (Norušis, 2012). The newly formed clusters are then observed for classification as low, moderate and high (task and/or ego orientation) according to our goal profiles. Once all participants were categorized into specific clusters according to their current goal profiles the data was screened for missing responses. After missing responses were dealt with, analysis of the statistical assumptions for a MANOVA were conducted in order to test for normality, homogeneity of covariance, homogeneity of variance, equal sample sizes and independence. A MANOVA was then conducted in order to determine if different goal profiles (TEOSQ scores) influenced the 5 PYD factors within the short-form YES-S. Follow up post hoc analyses were conducted in order to uncover the main differences in levels of PYD that occurred across each clustered goal profile.
CHAPTER FOUR: RESULTS

4.1 Cluster Analysis and Group Forming

Results from the two-step cluster analysis completed with SPSS classified each individual’s personal goal profile into 3 different clusters (see Figure 2). Twenty-two subjects were classified into Cluster 1 ($n = 22$) with a task-orientation cluster center of 3.71 and an ego-orientation cluster center of 1.64; this can be described as the moderate task/low ego cluster. Cluster 2 ($n = 31$) with a task-orientation cluster center of 4.40 and an ego-orientation center of 3.03, described as the high task/moderate ego cluster. Finally Cluster 3 ($n = 45$) with a task-orientation cluster center of 4.71 and an ego-orientation of 1.87, described as the high task/low ego cluster. For labeling purposes, from this section on Cluster 1 will be referred to as the Moderate/Low group, Cluster 2 will be referred to as High/Moderate group, and Cluster 3 will be the High/Low group, with the task-orientation label appearing first, then followed by the ego-orientation label, which follows the same labeling patterns from previous research (Cumming et al., 2002; Duff-Riddell & Louw, 2011; Hodge & Petlichkoff, 2000).

4.2 Statistical Assumptions of a MANOVA

4.2.1 Normality of sampling distributions. Normality was assessed by evaluating the skewness and kurtosis values for each cluster across all five PYD outcome factors, descriptive statistics can be found on Table 1. Personal and Social Skills and Cognitive Skills yielded skewness and kurtosis values that were non-significant thus the assumption for normality was upheld and the data can be considered normally distributed for this variable. In regards to Goal Setting the Moderate/Low cluster shows a slightly negatively skewed value of -1.28, and a leptokurtic value of +3.26. Further examination
of the kurtosis value yielded a $Z_{\text{kurtosis}}$ of +3.43 which is considered significantly leptokurtic (Field, 2013). This cluster also yielded one significant outlier (see Figure 5), Field (2013) suggested windsorizing to adjust distributions with significant outliers, and thus the outlier’s Goal Setting value was changed from 1.25 to 2.20. The other two clusters for Goal Setting provided non-significant skewness and kurtosis values. When looking at Initiative the Moderate/Low and High/Low clusters provided non-significant skewness and kurtosis values, whereas the High/Moderate cluster provided a negatively skewed value of -2.02, and highly leptokurtic kurtosis value of +3.81. The $Z_{\text{skewness}}$ was calculated at -4.81 and the $Z_{\text{kurtosis}}$ at +4.66, which can be considered highly skewed and kurtotic (Field, 2013). This cluster also showed two outliers present, but were not considered significant (see Figure 6) (Field, 2013). Negative Experiences yielded statically significant skewness and kurtosis values across all three clusters, (refer to Table 1 for descriptive statistics). This is due to the nature of how the short form YES-S evaluates the negative experiences of youth in sport. Some athletes experience the negative experiences that occur from sport more than others and some athletes have no negative experience at all, therefore trying to find normally a normally distributed sample is difficult. Hence, when looking at the PYD outcome factor of Negative Experiences caution must be taken when evaluating and interpreting the results.

4.2.2 Homogeneity of Variance and Covariance.

4.2.2.1 Homogeneity of Variance. According to Field (2013) homogeneity of variance refers to the assumption that across all levels of each variable the variances should be both similar and stable. The Levene's statistic was used to calculate equality of variance. For the five PYD factors, the Levene’s statistic yielded three non-significant $p$-
values; Personal and Social Skills, Goal Setting, and Negative Experiences. Personal and Social Skills $F = 2.34, p > 0.05$, Goal Setting $F = 0.82, p > 0.05$, and Negative Experiences $F = 0.38, p > 0.05$, therefore each of these factors upheld the assumption of equal variance. For Cognitive Skills and Initiative the Levene’s Statistic were statistically significant. Cognitive Skills $F = 3.24, p < 0.05$ and Initiative $F = 5.62, p < 0.05$, therefore the assumption of equal variance was not met for both of these factors and results of the Post-hoc analyses were adjusted and interpreted with equal variances not assumed.

**4.2.2.2 Homogeneity of Covariance.** According to Field (2013) homogeneity of covariance refers to the assumption that for each dependent variable the correlation between any two dependent variables is the same in all groups. This assumption is tested with a Box’s Test. Results revealed that the Box’s Test statistic was significant at 1.87, $p < 0.05$, therefore homogeneity of covariance cannot be assumed. Precautions must be taken in order to proceed, however Field (2013) states that with unequal group sizes the Box’s Test can be unstable and significant values can be trusted if the proper Post-hoc Games-Howell analyses is used.

**4.2.3 Equality of sample sizes.** Given the use of the Two-Step Cluster Analysis the sample sizes within the clusters were formed by the classification analysis therefore the assumption of equal sample sizes could not be confirmed, therefore precautions must be taken in order to validate the $F$-statistic and the proper Post-hoc Games-Howell analysis must be used.

**4.2.4 Independent observations.** Each participant individually filled out both of the questionnaires separately the only issue that could effect this assumption is that
certain athletes on the same team share the same coach. Therefore, when discussing the assumption that each observation is independent Tabachnick and Fidell (2007) suggests that each observation is not influenced by another factor or observation, hence precautions must be taken to continue data analysis.

4.3 Main Analyses

4.3.1 MANOVA. To examine whether PYD outcomes differed as a function of an athlete’s goal profile cluster. A MANOVA was conducted, with the PYD outcomes entered as the dependent variables, and the cluster groups entered as the fixed factor. There was a statistically significant difference found between PYD outcome scores by cluster groups [Pillai’s Trace = 0.276, $F(10,184) = 2.94$, $p < 0.05$, $\eta^2 = 0.14$].

4.3.2 Follow-up ANOVAs. The follow-up ANOVAs revealed significant differences between the clusters with respect to Initiative [$F(2,95) = 10.86$, $p < 0.001$, $\eta^2 = 0.19$] and Goal Setting [$F(2,95) = 3.95$, $p < 0.05$, $\eta^2 = 0.08$]. Variables that showed no statistical differences were Personal and Social Skills [$F(2,95) = 2.48$, $p = 0.089$, $\eta^2 = 0.05$], Cognitive Skills [$F(2,95) = 1.87$, $p = 0.159$, $\eta^2 = 0.038$] and Negative Experiences [$F(2,95) = 1.77$, $p = 0.173$, $\eta^2 = 0.036$] (refer to Table 2).

4.3.3 Post-Hoc Analyses. Follow-up post-hoc Games-Howell analyses were used for testing the statistical difference found for both Initiative and Goal Setting. The Games-Howell test was used due to group sizes and variances being unequal, in order to attain strong statistical power as suggested by Field (2013).

The Games-Howell tests for Initiative produced two statistical differences; firstly Moderate/Low vs. High/Moderate ($p < 0.5$), with Moderate/Low ($M = 3.51$, $SD = 0.45$) being lower than High/Moderate ($M = 3.84$, $SD = 0.28$). Secondly, Moderate/Low vs.
High/Low ($p < 0.01$), Moderate/Low ($M = 3.51, SD = 0.45$) again being lower than High/Low ($M = 3.85, SD = 0.20$), refer to Table 3.

The Games-Howell test for Goal Setting yielded one statically significant finding, with Moderate/Low vs. High/Low ($p < 0.5$), Moderate/Low ($M = 3.14, SD = 0.62$) was lower than High/Low ($M = 3.50, SD = 0.42$), refer to Table 3.
CHAPTER FIVE: DISCUSSION

The present study examined how different goal profiles, specifically categorized into a set of diverse clusters through cluster analysis, had different levels of PYD in an organized youth sport setting. It was hypothesized that athletes who report higher levels of task-orientation will have higher levels of the four positive outcome factors scored on the short-form YES-S. It was also hypothesized that those athletes with goal profiles, who reported a combination of low levels of task-orientation and high levels of ego-orientation, reported higher levels of the Negative Experience PYD outcome factor, as well as no differences in the scores of the four positive outcome factors. Lastly it was hypothesized that athletes who report a goal profile that can be considered high levels of both task and ego-orientation resulted in higher levels of all five of the PYD outcome factors on the short-form YES-S. Findings indicate that for the first hypothesis it was not completely supported due to the results revealing only two statistical significances out of the four positive PYD outcome factors, with those goal profiles with high task-orientation reporting higher scores on Goal Setting and Initiative than those with lower task-orientation. The second hypothesis was not supported because results revealed no statistically significant differences between all clusters for the Negative Experiences PYD outcome factor. For the last hypothesis it was not supported since results revealed that there were no clusters that reported both high task and high ego-orientation, therefore there was no possible way to test if a High/High cluster would be statistically significant throughout all five of the PYD outcome factors. Therefore, these findings suggest that athletes who have goal profiles with higher levels of task-orientation, reported generally
higher PYD scores for Goal Setting and Initiative, compared to those athletes with lower levels of task-orientation.

5.1 Cluster Analysis Consistency

The Two-Step Cluster Analysis completed in SPSS with this data set provided results that have been consistent with other studies using cluster analysis. It is important to note that not all studies have the exact same cluster centers and the exact same number of clusters, but that is bound to happen with the variability seen across the different samples used. The cluster analysis completed by Kuan and Roy (2007) provided three clusters, Cluster 1 labeled High Task/ Moderate Ego, Cluster 2 labeled Moderate Task/ Low Ego, and Cluster 3 labeled Moderate Task/ Moderate Ego, this is consistent with the cluster analysis in this current study showing a generally higher scores for task-orientation and lower scores for ego-orientation. The cluster analysis completed by Cummings et al. (2002) also yielded 3 clusters, Cluster 1 labeled Low Task/ Moderate Ego, Cluster 2 labeled Moderate task/ Low Ego and Cluster 3 labeled Moderate Task/ High Ego. Although the labels given to the cluster are not as similar to this current study, the labels seem to be relative to their own data set with their highest task-orientation cluster center being 4.36, labeled as Moderate task-orientation, and their highest ego-orientation cluster center being 3.90 being labeled High ego-orientation (Cummings et al., 2002). Hodge and Petlichkoff (2000) completed a cluster analysis with a sample of 257 rugby players, although their cluster analysis yielded four clusters their goal profile data range for both task and ego orientation was consistent with this current study.
5.2 Differences in PYD Outcome Factor Scores between Clusters

The primary objective to this study was to examine how different goal profiles, categorized into a set of specific clusters, can influence the way young athletes positively develop through sport. Results revealed that there were differences that occurred, but not on the full scale that was hypothesized. Only two of the four beneficial PYD outcome factors, Initiative and Goal Setting yielded statistical differences, with Personal and Social Skills and Cognitive Skills providing no statistical differences across all clusters.

5.2.1 Differences in Initiative. As reported in section 4.3.3, results from the post-hoc analysis for Initiative yielded two significant differences between clusters. The first difference reported was that the High/Moderate cluster reported significantly higher Initiative scores than those athletes in the Moderate/Low cluster. The second difference reported was that the High/Low cluster also scored significantly higher on Initiative than the Moderate/Low cluster. Although this is the first study to test the differences between clustered goal profiles and PYD outcomes, these results are consistent with the reviewed literature (Larson, 2000; MacDonald et al, 2012) that looked at how intrinsic motivation and initiative can be influenced by goal orientation. With that being said the results reported are somewhat intuitive in nature showing that those athletes who report to have higher task-orientations also have higher Initiative scores. For example, both Paskevich et al. (2007) and Mack et al. (2010) reported that athletes with high levels of task-orientation have been associated with having greater enjoyment for sport, as well as higher levels of intrinsic motivation, “intrinsic motivation is highly correlated with positive developmental outcomes within sport” (Vella et al., 2011, p. 44). Furthermore, Biddle et al. (2003) stated that people who are more inclined to task oriented behaviours...
are often more intrinsically motivated to develop skill, and also become part of a team, which would help with team oriented sports.

Larson (2000) stated that one of the core factors to adolescent development is initiative, and that in the 21st century adolescents have few opportunities to learn it. Interestingly enough Larson and colleagues created the YES and YES 2.0, hence why the previous statement about the importance of initiative for adolescent development carries strong empirical weight. Larson (2000) stated that initiative consists of strong agentic behaviours to be motivated intrinsically towards challenging goals. Therefore the environments created within sport are very beneficial to young people, because many of the healthy behaviours such as goal setting and initiative can be taught by role models such as coaches and peer mentors (Larson, 2000).

5.2.2 Differences in Goal Setting. The post-hoc analysis reported in section 4.3.3 showed that for Goal Setting there was one statistically significant difference between clusters. The difference occurred when comparing the athletes in Moderate/Low cluster to the athletes in the High/Low cluster, in which the results showed that the High/Low cluster provided significantly higher Goal Setting outcomes than those athletes in the Moderate/Low cluster. With this being a novel study looking at how athletes with goal profiles could influence PYD outcomes, it is interesting to see how the outcome factor of Goal Setting provided some significant findings due to the importance that goal setting has on motivation and completing goals in sport. In a sporting environment those athletes who report higher levels of task-orientation have a greater association with improving sport specific skills and mastery (Biddle et al., 2003; van de Pol & Kavussanu, 2011). Biddle et al. (2003) stated that this association between mastery and task-orientation has
been prevalent in the Achievement Goal Theory literature and research for many years, and it is often one of the reasons task-orientation is viewed in such a positive light. Task-orientation uses more process based goals, such as how to improve the process of the action instead of the outcome; hence the use of goal setting focusing on process goals allowed the athletes to set small goals for optimal challenges, and focus on the process rather than the outcome (McCarthy, Jones, Harwood & Davenport, 2010). McCarthy et al. (2010) posited that athletes who use goal setting often explain that it “give[s] purpose to training” (p. 63) and allows them to challenge their performance accomplishments in a practice setting. Those athletes who use goal setting with process goals had strong associations with increased enjoyment due to the fact that their improvements were clearly recognizable (Harwood, Cumming & Fletcher, 2004; McCarthy et al., 2010).

With goal setting skills being crucial for productivity and performance McCarthy et al. (2010) stated that it is highly transferable to environments in the business domain helping individuals with motivational focus, effort and developing new learning strategies, hence the strong emphasis on goal setting within PYD research.

### 5.3 Non-significant Findings

With the primary objective of this study being to observe the differences in PYD outcomes as a result of the influence of different goal profiles, not all of the results yielded statistically significant values, in fact it is important to note that only three out of a possible fifteen comparisons were reported as statistically significant. With the protocol of a cluster analysis occurring once the data has been collected, most of the hypotheses were created without the knowledge of how the clusters would form. Any interpretation of the hypotheses and the support or lack of support found in the data should
acknowledge this. With that being said, even though there were some statically significant findings, the hypotheses that were predicted either were not supported fully or had no empirical support. But, it is also important to discuss what some of the non-significant findings could indicate.

5.3.1 Initiative and Goal Setting. For Initiative there was no statistical difference found between the High/Low cluster and the High/Moderate cluster; this could be because both clusters have similar values of task-orientation which could allow associations to be drawn between reported levels of task-orientation and the PYD outcome factor of Initiative. With previous research reporting that initiative has strong links to intrinsic motivation, those who report higher levels of task-orientation have the possibility to be directly associated with similarly higher levels of the PYD outcome factor of Initiative (Biddle et al., 2003; Larson, 2000; MacDonald et al., 2012).

For the outcome factor of Goal Setting, there were two non-significant findings, which were the difference between the Moderate/Low cluster and the High/Moderate cluster, as well as the difference between the High/Moderate cluster and the High/Low cluster. These findings are interesting because they do not follow the differences that were found for Initiative, therefore there are some other factors that could influence how young athletes’ Goal Setting skills are developed. McCarthy et al. (2010) discussed that those athletes with greater task-orientation are more focused on process goals, whereas those athletes who are more ego oriented are more focused on the outcome goals and results of competition and training. Mack et al. (2010) stated that a focus on outcome goals is often seen as detrimental and maladaptive to athletes, due to the negative social comparisons that occur after a bad performance. With that being said, there could be a
possibility that those athletes in the High/Moderate cluster that reported high task-orientation and moderate levels of ego-orientation could be geared towards more of an outcome based focus due to their higher levels of ego-orientation and therefore possibly causing some setbacks to the way their goal setting skills are positively developed.

5.3.2 Personal and Social Skills and Cognitive Skills. In regards to Personal and Social Skills, the results provided no statistical differences between all three clusters. This was seen as surprising due to much of the literature pointing towards how influential sport has been towards increasing personal and social skills for young athletes (Hellison, 2003; MacDonald et al. 2012). But, the outcome factors of Personal and Social Skills is heavily influenced by the strong relationships formed between various role models such as peers, parents, professional sports icons, and coaches (MacDonald et al. 2012). Even though increases to task-orientation have been found to increase sportsperson-like behaviours and proper social protocol within sport (Sit & Lindner, 2007), it can be hard to find associations and influences between two different concepts such as task and ego-orientations and Personal and Social Skills due to the fact that task and ego-orientation are heavily based on motivation and AGT.

The PYD outcome factor of Cognitive Skills also yielded no statistical significances between the three clusters. Again this was seen as surprising due to how MacDonald et al. (2012) formed the YES-S outcome factors of Cognitive Skills around how sport can increase skills such as creativity, strategy and problem solving, which are all skills Biddle et al. (2003) and Mack et al. (2010) had found to increase with increases to task-orientation. Both Cumming et al. (2002) and Sit and Lindner (2007) reported that their respective clusters with higher task-orientation saw statistically different increases
to cognitive behaviours as compared to those who had lower task-orientation. This was not the case for this study, with the results showing that there was no statistical differences in cognitive skills between any and all of the three clusters.

5.3.3 Negative Experiences. Throughout the Achievement Goal Theory literature ego-orientation has been seen to be relatively negative for development, Mack et al. (2010) stated that those athletes with higher levels of ego-orientation produce less effort and willingness to continue to participate in sport. Dunn et al. (2002) stated that high levels of ego-orientation can lead to mal-adaptive perfectionism, and negative social comparison. Biddle et al. (2003) also found that those who are highly ego oriented are more likely to act unsportperson-like and cheat to win. With all of these negative connotations towards ego-orientation, the results from the Negative Experiences outcome factor should have provided some statistical differences between the clusters that provided higher ego-orientations.

For the Negative Experiences PYD outcome factor, any and all results should be viewed cautiously due to the violation of many of the statistical assumptions of a MANOVA. With that being said, it is also important to note that for a survey such as the short-form YES-S that is highly based around the positive development of young athletes, it is difficult to produce normally distributed data. Therefore, even though Negative Experiences provided data with no significant differences between all three clusters, the results are still interesting. What is interesting is that the mean scores of Negative Experiences across each cluster shows concurrent increases with ego-orientation (refer to Table 1). Therefore the High/Moderate cluster has the highest mean Negative Experiences score, with the second highest being the High/Low cluster,
followed up with the lowest being the Moderate/Low cluster. Although this pattern was not statistically significant it is interesting to see how different levels of ego-orientation could possibly influence the PYD outcome factor of Negative Experiences.

5.4 Limitations

One of the limitations to the present study is that the use of cluster analysis, while trying to be as inclusive as possible, is still a grouping method that uses statistics to categorize participants. This grouping method could place certain participants into groups that while statistically sound, does not truly represent their measured levels of task and ego-orientation. Therefore caution must be taken in assessing each of the cluster scores distances away from each of the cluster centers produced in the analysis.

Another factor to add in regards to limitations of cluster analysis, is that not all samples are exactly the same, therefore some of the clusters that were grouped with this current data set might not be in exact relation with other studies. For example, this data set did not provide many samples with high scores on the ego-orientation side of the TEOSQ, therefore no cluster were formed with both high task and high ego-orientation. This type of cluster has occurred with other studies, such as Cumming et al. (2002); Pensgaard and Roberts, (2003), which was why this cluster was included in hypothesis 3. This problem can also arise due to the fact that any data set, even randomly generated data sets, can be used in a cluster analysis, this can give the sense that there is an absence of normative data. With that being said it is important to focus on how strong the cluster qualities are formed via SPSS, in order to make sure that the cluster analysis is used in a valid and reliable fashion.
The short-form YES-S as well as the YES-S from its original inception has yet to be considered the gold standard of measuring PYD quantitatively. Throughout much of the PYD literature there is a sense that a gold standard quantitative measurement tool has yet to be empirically created. Each of the three tools, mentioned earlier in the literature review, measuring PYD on either developmental assets, 5 C’s or the short-form YES-S are still being used in various academic circles as researchers try and collectively create a gold standard for the measurement of positive development in various settings.

Another limitation to this study is the validity of the data, due to questionnaires being self-report in nature. Participants will be asked to provide truthful and honest answers to all questions. It will be emphasized that all answers will remain confidential and anonymous, and that there are no right or wrong answers. However, it is acknowledged that each participant may not adhere to this request.

In addition, with participants being between the ages of 13-18 there are a few questions that might make the participants feel embarrassed to answer or uncomfortable, such as “youth in this activity got me into drinking alcohol or using drugs” or “adult leaders in this activity are controlling and manipulative”. But these questions are necessary for the measurement tool and have been chosen as crucial items as per the confirmatory factor analysis.

5.5 Implications

The primary implications of the present study is that in a sport environment, higher levels of task-orientation in combination with generally low levels of ego-orientation could possibly influence the way young athlete positive develop. Past research conducted by Duda (1989) suggested that task-orientation was more associated with
positive benefits to behaviour and ego-orientation was more associated with negative
deficits to behaviour, this finding was further strengthened by the meta-analysis
completed by Biddle et al. (2003). Biddle and colleagues’ meta-analysis was the first
comprehensive look at how difference achievement orientations influence behaviours.
With a collection of over 200 different samples they found that there were strong
associations between positive behaviours and task-orientation and negative behaviours
and ego-orientation. Not all of the PYD outcome factors were influenced by different
levels of task and ego-orientation, but it is important to recognize the impact that varying
goal profiles had on the outcome factors of Initiative and Goal Setting.

With that being said, Larson (2000) suggested that initiative is one of the most
important facets of development for adolescents and young adults. Therefore, the results
of the present study imply that task-orientation can be a very healthy asset to a young
athlete’s motivational orientation and how they can foster and develop increases to
certain positive youth development factors. For example, if a sport environment is more
conducive to task oriented behaviours and has a strong emphasis on young athlete
building and mastering sport specific skills, those young athletes could develop more
intrinsic motivation, autonomy, and initiative. Therefore, these types of environments
would allow an athlete who is participating in any type of sport and on any competitive
level to develop those pivotal positive youth development factors.

In regards to the results from the Goal Setting outcome factor, the implications
would suggest that the emphasis from instructors, team leaders, team captains and
coaches, should be placed on introducing more process based goals rather than focus on
the outcome based goals. Building skills and improving ability should hold much more
importance than the outcome of winning or losing, especially for young athletes, and as McCarthy et al. (2010) suggested athletes who are more task oriented tend to enjoy training and practice more, set more optimistic goals that are both challenging and realistic, as well as increase/perpetuate participation.

5.6 Future Directions

The future directions of this study will first have a direction more focused on coaching and coaching behaviour in Canada and how it can influence PYD. From there, once a strong knowledge base of the various coaching behaviours and environments in Canada have been set up, the next step would be to study how coaching behaviours and the motivational climate of a team and/or sport can influence an athlete’s motivational orientations and positive youth development.

In regards to coaching, a critical aspect of organized sport is having coaches who are prepared to volunteer their time, as well as have the knowledge, attitude, and skill to help each individual athlete (Coakley, 2011). Lemyre, Trudel, and Durand-Bush (2007) have shown that many youth coaches work by themselves in order to build coaching skills, rather than taking the opportunity to build new coaching skills through discussions with peers. These same researchers report a general consensus amongst coaches that formal coach education is perceived as unimportant, and that to coaches the most important factor in developing coaching skill is previous athletic performances rather than educational seminars or programs. In the past, much of the research on improving coaching skills and knowledge was focused on elite coaches, often neglecting the coaches that are most widespread throughout youth sport (Lemyre et al., 2007). With many of the coaches across Canada being volunteers, and an existing high level of demand for
coaches, there are very little requirements set in order for people to fill this large need (McCallister, Blinde, & Kolenbrander, 2000; Wright, Trudel, & Culver, 2007). But the Canadian government and the Coaching Association of Canada (CAC) have developed the National Coaching Certification Program (NCCP), where coaches can attend a series of seminars and courses, categorized into specific sport groups, that are based on building and improving specific coach related skills. Unfortunately, in Canada these courses are not mandatory and many sport organizations and leagues across the country have huge differences in how experienced and educated their coaches are. Therefore, with a lack of mandatory coaching classes and/or seminars, there are no widespread lessons or opportunities for coaches to learn and mobilize the knowledge observed through positive youth development, achievement goal orientation and coaching research, to help improve the sport environments our young athletes are being exposed to.

5.7 Conclusions

The present study found that when looking at different clustered goal profiles only certain aspects of positive youth development were influenced. In general, the PYD outcome factors that had more to deal with intrinsic motivation, effort and progress through goal setting saw the biggest influences of change (i.e. Initiative and Goal Setting), and more importantly the change trended in the beneficial direction. However, it is also important to report and interpret the non-significant results in order to observe how different personalities, and dispositions can influence positive development. The present study suggests that a sporting environment that is more conducive to high levels of task-orientation and lower levels of ego-orientation could possibly lead to increases in PYD. For example, if sport organizations, administrators, coaches and even parents can
start to embrace a more task oriented atmosphere for their young athletes, the sport environment can be used to help those athletes foster a more task oriented goal profile, which will hopefully in turn foster more positive youth development. Future studies should continue to look at how coaches and coaching behaviour can influence the motivational climate within the sport environment, and to observe if those influences on a young athlete’s task and ego orientation can help to foster positive youth development.
References


### Mean, Standard Deviation, Skewness, and Kurtosis Values for each Cluster

<table>
<thead>
<tr>
<th>PYD factors</th>
<th>Cluster 1 - Moderate/Low</th>
<th>Cluster 2 - High/Moderate</th>
<th>Cluster 3 - High/Low</th>
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<tr>
<td><strong>Personal and Social Skills</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean (SD)</td>
<td>3.35 (±0.49)</td>
<td>3.48 (±0.38)</td>
<td>3.58 (±0.36)</td>
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<td>Skewness (Std. Error)</td>
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<td>Kurtosis (Std. Error)</td>
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<td>3.32 (±0.45)</td>
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<td>Skewness (Std. Error)</td>
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<td>3.85 (±0.20)</td>
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<tr>
<td>Mean (SD)</td>
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Table 2

*Summary of Follow-up ANOVAs*

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*p < 0.05, **p < 0.001
Table 3

Summary of Post-Hoc Games-Howell Analyses

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*p < 0.05, **p < 0.01
Figures 1. Key Factors Influencing Motivated Behaviour in Achievement Goal Theory (Paskevich et al., 2007).
Clusters

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*Input (Predictor) importance:

1.0 □ □ □ □ □ □ □ □ 0.8 □ □ □ □ □ □ □ □ 0.6 □ □ □ □ □ □ □ □ 0.4 □ □ □ □ □ □ □ □ 0.2 □ □ □ □ □ □ □ □ 0.0 □ □ □ □ □ □ □ □

*Figure 2. Two-Step Cluster Analysis Output.*
Figure 3. Outlier Box-Plot for Personal and Social Skills for each Cluster.
Figure 4. Outlier Box-Plot for Cognitive Skills for each Cluster.
Figure 5. Outlier Box-Plot for Goal Setting for each Cluster.
Figure 6. Outlier Box-Plot for Initiative for each Cluster.
Figure 7. Outlier Box-Plot for Negative Experiences for each Cluster.
APPENDIX A: Email Announcement to Organization

Dear [name of administrator of the sports organization],

My name is Matthew Marini, I am a Masters student at Brock University studying sport psychology in the Applied Health Science Department. My focus within sport psychology is based around youth sport and Positive Youth Development. I’m contacting you to request the possibility of allowing your athletes between the ages of 13 to 18 to participate in research study looking at how participation in youth activities such as organized sport can have both positive and negative outcomes. Our main focus will be to see how different motivational personality types can cause different levels of positive and negative outcomes within Positive Youth Development. All of the participants’ response will remain confidential and also anonymous.

Upon your permission, please forward to all coaches in your program and ask to contact me mm06tu@brocku.ca if they are interested in participating in study.

Thank you for your time and I look forward to hearing back from you,

Matthew Marini.
APPENDIX B: Email Announcement to Coaches

Dear [Coach],

My name is Matthew Marini, I am a Masters student at Brock University studying sport psychology in the Applied Health Science Department. My focus within sport psychology is based around youth sport and Positive Youth Development. I’ve have already been in contact with [name of administrator of the sports organization], requesting their permission to get in contact with you and your athletes with the possibility of allowing your athletes between the ages of 13 to 18 to participate in research study looking at how participation in youth activities such as organized sport can have both positive and negative outcomes. Our main focus will be to see how different motivational personality types can cause different levels of positive and negative outcomes within Positive Youth Development. All of the participants’ response will remain confidential and also anonymous.

Upon your permission, I would like to set up a meeting with the athletes and their parents after one of their scheduled practice in order to talk to the athletes and ask if they would like to participate in a short research study that will only take about 20 minutes.

Thank you for your time and I look forward to hearing back from you,

Matthew Marini.
APPENDIX C: Informed Consent Form

Informed Consent

Date: Spring 2014 to Summer 2015
Project Title: Do Young Athletes’ Achievement Orientation influence how they will Positively Develop Through Sport?

Student Investigator: Matthew Marini, MA (c) 
Department of Kinesiology, Brock University
Phone: (905) 888-5550 Ext. 4787
Email: mm0568@brocku.ca

Faculty Supervisor: Philip Sullivan, PhD
Department of Kinesiology, Brock University
Phone: (905) 688-5550 Ext. 4787
Email: psullivan@brocku.ca

INVITATION
You are invited to participate in a research study that will examine the Positive Youth Development levels of athletes who have different motivational behaviours and motivational goal profiles, who are participating in different competition levels across a wide variety of sports. The Coaching Association of Canada has three main competition levels; community, instructional or competitive, the community level of competition refers to recreational sport or first time participation, the instructional level lessons or practices where youth want to build sport specific skill, and the competitive refers to high levels of competition such as all-star or elite sport.

WHAT’S INVOLVED
As a participant, you will be asked to fill out the provided questionnaires, these questionnaires will have questions relating to how your experiences and participation in sport has effected you in a positive and/or negative way. As well as asking questions about motivation and goal setting in sports. We will then ask you to place all of questionnaires and forms into and envelope upon completion. Participation will take approximately 20 minutes of your time.

POTENTIAL BENEFITS AND RISKS
Possible benefits of participation include the ability to view how participation in youth sport has positively impacted their development. There are no known or anticipated risks associated with participation in this study.

CONFIDENTIALITY
All information you provide is considered confidential; your name will not be included or, in any other way, associated with the data collected in the study. Furthermore, because our interest is in the average responses of the entire group of participants, you will not be identified individually in any way in written reports of this research. Data collected during this study will be stored in a locked office. Data will be kept for two years following the completion of the study after which time any files will be destroyed. Access to this data will be restricted to the Principal Student Investigator and the Faculty Supervisor.

VOLUNTARY PARTICIPATION
Participation in this study is voluntary. If you wish, you may decline to answer any questions or participate in any component of the study. Participants may withdraw from the study up until they have submitted the questionnaire in the sealed envelope. At this point, responses will be anonymous and researchers will not be able to identify individual answers.

PUBLICATION OF RESULTS
Results of this study may be published in professional journals and presented at conferences. Feedback about this study will be available. You may contact Matthew Marini by email if you wish to receive the results, when the study is completed, by September 1st, 2015.

CONTACT INFORMATION AND ETHICS CLEARANCE
If you have any questions about this study or require further information, please contact Matthew Marini or Philip Sullivan using the contact information provided above. This study has received and received ethics clearance through the Research Ethics Board at Brock University [13-228]. If you have any comments or concerns about your rights as a research participant, please contact the Research Ethics Office at (905) 688-5550 Ext. 3035, rebo@brocku.ca.

Thank you for your assistance in this project. Please keep a copy of this form for your records.

ASSENT (Age 15 and Under)

I agree to participate in this study described above. □
If you decide to participate in this study please have your Parent or Guardian sign the next section.

CONSENT (For Parental Guardians)

I agree to participate in this study described above. I have made this decision based on the information I have read in the Information-Consent Letter. I have had the opportunity to receive any additional details I wanted about the study and understand that I may ask questions in the future. I understand that I may withdraw this consent at any time.

Name: __________________________________________
Signature: ___________________________________ Date: ____________________
APPENDIX D: Short-form YES-S

Demographic Questions:
1. How old are you? ___________
2. Are you: Male Female (circle one)
   Please answer the following questions thinking of only one sport.
3. What is the sport that you play? ___________
4. How long have you played this sport? ___________
5. What is the highest level that you have played this sport (circle one)?
   House league School Representative/competitive
   If rep/competitive, state which level _________________
6. How long have you played for this team/club? ___________

Based on your experience in this sport:

<table>
<thead>
<tr>
<th>Statements</th>
<th>Not a lot</th>
<th>A little</th>
<th>Quite a bit</th>
<th>Yes, definitely</th>
</tr>
</thead>
<tbody>
<tr>
<td>I became better at sharing responsibility</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>I learned that working together requires some compromising</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>I learned to be patient with other group members</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>I learned how my emotions and attitude affect others in the group</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>I have improved: Skills for finding information</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>I have improved: Academic skills (reading, writing, math, etc.)</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>I have improved: Computer/internet skills</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>I have improved: Artistic/creative skills</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>I learned to find ways to achieve my goals</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>I set goals for myself in this activity</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>I learned to consider possible obstacles when making plans</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Observed how others solved problems and learned from them</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>I learned to push myself</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>I learned to focus my attention</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>I put all my energy into this activity</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>I have improved athletic/physical skills</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Adult leaders in this activity are controlling and manipulative</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Adult leaders intimidate me</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Adult leaders make personal comments that I find upsetting</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Adult leaders encouraged me to do something I believed morally wrong</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Youth in this activity got me into drinking alcohol or using drugs</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>I was treated differently because of my gender, race, ethnicity, disability, or sexual orientation</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>
### APPENDIX E: Task and Ego Orientation in Sport Questionnaire

<table>
<thead>
<tr>
<th>Questions</th>
<th>Strongly Disagree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) I am the only one who can do the play or skill</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>2) I learn a new skill and it makes me want to practice more</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>3) I can do better than my friends</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>4) The others cannot do as well as me</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>5) I learn something that is fun to do</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>6) Others mess up but I do not</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>7) I learn a new skill by trying hard</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>8) I work really hard</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>9) I score the most points/goals/hits, etc.</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>10) Something I learn makes me want to go practice more</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>11) I am the best</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>12) A skill I learn really feels right</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>13) I do my very best</td>
<td>1</td>
<td>5</td>
</tr>
</tbody>
</table>
APPENDIX F: Ethics Approval

Date: April 20, 2015

Principal Investigator: SULLIVAN, Philip - Kinesiology

File: 13-228 - SULLIVAN

Type: Masters Thesis/Project

Student: Matthew Marini

Supervisor: Philip Sullivan

Title: Do Different Levels of Competition in Youth Sport Program Influence Positive Youth Development

Ethics Clearance Granted

Type of Clearance: MODIFICATION

Expiry Date: 4/29/2016

The Brock University Social Sciences Research Ethics Board has reviewed the above named research proposal and considers the procedures, as described by the applicant, to conform to the University's ethical standards and the Tri-Council Policy Statement.

Modification: Consent process changed (participants who are 16 or older do not require parental consent).

The Tri-Council Policy Statement requires that ongoing research be monitored by, at a minimum, an annual report. Should your project extend beyond the expiry date, you are required to submit a Renewal form before 4/29/2016. Continued clearance is contingent on timely submission of reports.

To comply with the Tri-Council Policy Statement, you must also submit a final report upon completion of your project. All report forms can be found on the Research Ethics web page at http://www.brocku.ca/research/policies-and-forms/research-forms.

In addition, throughout your research, you must report promptly to the REB:

a) Changes increasing the risk to the participant(s) and/or affecting significantly the conduct of the study;
b) All adverse and/or unanticipated experiences or events that may have real or potential unfavourable implications for participants;
c) New information that may adversely affect the safety of the participants or the conduct of the study;
d) Any changes in your source of funding or new funding to a previously unfunded project.

We wish you success with your research.

Approved: [Signature]

Jan Friligers, Chair
Social Sciences Research Ethics Board

Note: Brock University is accountable for the research carried out in its own jurisdiction or under its auspices and may refuse certain research even though the REB has found it ethically acceptable.

If research participants are in the care of a health facility, at a school, or other institution or community organization, it is the responsibility of the Principal Investigator to ensure that the ethical guidelines and clearance of those facilities or institutions are obtained and filed with the REB prior to the initiation of research at that site.