

**Examining Equity, Diversity, and Inclusion in Talent Identification and Talent
Development in Youth Soccer in Canada: Coaches' Perspectives**

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A thesis submitted to the Faculty of Graduate Studies of

The University of Manitoba

In partial fulfillment of the requirements of the degree of

Master of Arts

Faculty of Kinesiology and Recreation Management

University of Manitoba

Winnipeg

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Abstract

Talent identification and talent development often depend on interconnected variables, such as the athlete's environment, maturation, the roles of stakeholders, and relationships created and maintained throughout both processes. Talent identification and development require significant resources and finances dedicated to searching for and developing athletes. This qualitative study examines the factors influencing talent identification and talent development processes for youth-aged soccer players in Canada. Insights about talent identification and development were gathered from 16 youth soccer coaches with experiences across different stages of the talent development pathway. Each coach participating in the study took part in a semi-structured interview addressing their awareness of talent identification and talent development processes in Canadian youth soccer, their experiences within its talent development environment, and the challenges/solutions they see to improve the number of talented youth soccer players. A thematic analysis process was used to gain insights and identify themes from the interviews.

Participants identified different perspectives on talent, talent identification, and talent development. The results of this study demonstrate an inequitable talent identification and development system, which is limited by athletes' place of birth, socio-economic status, and access to necessary resources. To address the identified constraints, coaches participating in this study recommend: 1) improving access to youth soccer, 2) not driving talent identification and talent development processes on pay-for-play or profit models, 3) prioritizing the social-emotional well-being of children and youth athletes, 4) having a clear definition of talent, talent identification, and talent development, and 5) investing to build system capacity and eliminate inequities.

Acknowledgments

I want to express my special gratitude to my Graduate Supervisor, Dr. Kyoung June (David) Yi, Associate Professor at the Faculty of Kinesiology and Recreation Management, the University of Manitoba, for providing me with the opportunity to complete this master's research project. Dr. Yi's guidance and support have greatly benefited my learning and will improve my contributions to my career and future research endeavours. I would also like to thank my Graduate Committee for their insights and feedback throughout the research and writing process. I have been incredibly fortunate to have an experienced and knowledgeable group of academics to learn from.

A special thank you goes to the study's participants for taking the time out of their busy coaching and work schedules to participate in an interview for this project. Our conversations clearly show your passion for growing the game of soccer in Canada. Your guidance has undoubtedly impacted many players on and off the field. I am thankful for this opportunity to present your perspectives to the youth sports community. Hopefully, these perspectives may be used to create positive experiences and opportunities for youth soccer players across Canada.

Dedication

This project is dedicated to the many youth soccer players that I have coached in Newfoundland and Labrador, and Manitoba who continue to achieve great things on and off the soccer field and to the many coaching colleagues I have met through the years who continue to inspire children and youth to be the best versions of themselves. Most importantly, this project is dedicated to my parents (Derek and Janice Howell) and to my grandfather (Ronald Howell) who have supported me through three undergraduate degrees and now a master's and never missed a hockey or soccer game I played or a soccer game I coached.

List of Abbreviations

Abbreviation	Meaning	Page
CCAA	Canadian Collegiate Athletic Association	12
CONCACAF	Confederation of North, Central and Caribbean Association Football	16
CPL	Canadian Premier League	11
DMGT	Differentiated Model of Giftedness and Talent	32
DMSP	Developmental Model of Sport Participation	33
EPPP	Elite Player Performance Plan	198
FIFA	Federation International Football Association	12
L10	League 1 Ontario	12
LTAD	Long-Term Athlete Development	7
MLS	Major League Soccer	11
NCAA	National Collegiate Athletic Association	13
NSO	National Sports Organization	1
NTC	National Training Center	13
NWSL	National Women’s Soccer League	12
PDL	Premier Development League	13
PSO	Provincial Sport Organization	11
RAE	Relative Age Effect	43
SUPS	Speed, Understanding, Personality, Skill	5
TABS	Technique, Attitude, Balance, Speed	5

TIPS	Talent, Intelligence, Personality, Speed	5
UEFA	Union of European Football Associations	46
USL	United Soccer League	12

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Chapter 1: Introduction

Every year, soccer clubs, academies, and associations enroll thousands of youth players into their talent development systems (Sweeney et al., 2022). Within these systems, many stakeholders develop what they feel to be high-potential youth players (Sweeney et al., 2022). However, talent identification and development processes are complex, with success influenced by various innate, psychological, environmental, and behavioural factors (Sweeney et al., 2022; Till & Baker, 2020). Differences in sports systems, societal norms, and cultural traditions, sociological and organizational issues may influence an athlete's complex career development journey (Finnegan, 2020; Henriksen et al., 2010; Stambulova, 2009). Development processes require significant human and financial input from various stakeholders (Finnegan, 2020) therefore impacting the implementation of such processes at different stages of the development pathway. Many potentially talented youth-aged soccer players are excluded from Canada Soccer's talent identification and talent development systems by a number of inequities and constraints that are both controllable and uncontrollable from practitioners.

Talent identification and talent development have important implications for modern-day sports activities. The term 'talent' is readily used across different domains, but there appears to be a lack of consensus on what talent defines explicitly (Larkin & Reeves, 2018; Till & Baker, 2020). In a sporting context, what one defines as a talented athlete or views as someone with high potential could significantly differ from one individual or organization to another. What one person views as talent, another could see as an inability in the same athlete. The financial and competitive pressures for success at professional and international levels of the sport have necessitated clubs, national sports organizations (NSO), and teams to invest heavily in scouting,

recruiting, and nurturing youth players. Many of these pressures trickle down to the sport's child and youth levels, making systems very adult-centred.

The premise of this study is to examine talent identification and development as it relates to Canada Soccer's ability to identify and develop youth soccer players. The perspectives of coaches across the country, representing different levels of the game, can provide valuable insight into these processes and how constraints can hinder the progression of youth soccer players in Canada. Coaches at the various developmental levels of youth soccer are the most active in implementing talent identification and development policies and procedures. They often make decisions related to these processes at the youth age level. Youth soccer in Canada provides a thought-provoking context for studying talent identification and development in youth sports. Despite soccer being immensely popular as a participatory sport in Canada, few players have advanced through the Canadian talent development pathway to succeed at the game's highest professional and international levels in both the men's and women's games. This thesis will examine the current structures and constraints found in Canada Soccer's talent identification and how the talent development pathways automatically exclude a vast number of potentially talented players across the country.

Since the term talent can have different meanings to different people, it is necessary to define operational terms for talent, identification, and development intended for use in this study. For this study, the term talent means the presence of skills or qualities identified at earlier points that correlate to or predict expert performance (Cobley et al., 2012). In soccer, talent identification is primarily concerned with selecting pre-pubertal athletes, and talent development focuses on their progression as athletes from puberty into adulthood (Sweeney et al., 2022). In this study, talent identification will describe the process of recognizing current participants with

the potential to become elite players (Williams & Reilly, 2000). Lastly, talent development refers to the athlete's continuous progress through numerous interactions with their environment (Till & Baker, 2020). As will be explained below, the research literature connects talent development to the interaction of mechanical and physical attributes, socio-cultural environment, and psycho-behavioural characteristics (Finnegan, 2020).

For the purposes of this study, it is also important to clarify the terms children, adolescent, and youth. The Convention on the Rights of the Child (UN Assembly, 1989) is an international treaty that recognizes the human rights of children. It defines a "child" as a person below the age of 18 unless the relevant laws recognize an earlier age of majority. The United Nations also defines "youth" as those persons between the ages of 15 and 24 years. However, a youth soccer in Canada ends at the Under-17 age band. An adolescent is a young person who has begun puberty but not yet become an adult. Adolescence generally occurs between the ages of 10 and 19 years and is a period of significant cognitive, physical, and behavioural changes. In this study, a child will represent those people under the age of 18, and adolescent will be a person between the ages of 10-18, and a youth will be a person who is eligible to play in a Canada youth soccer clubs which would be under the age of 17.

1.1 What is Talent?

Talent is complex, hard to define and lacks a clear theoretical framework (Baker & Till, 2020; Finnegan, 2020; Vaeyens et al., 2008). It has been and likely always will be challenging to describe what constitutes a talented sports performer because of a lack of a universally agreed-upon definition explaining what talent is (Larkin & Reeves, 2018; Vaeyens et al., 2008). What constitutes talent can be controversial and restricted because of the individual differences in abilities and outcomes that athletes display (Christensen, 2009; Coutinho et al., 2016; Larkin &

Reeves, 2018). Considering that the definition of talent is complex, any criteria used to determine what a talented athlete will account for the contextual characteristics and features specific to that athlete's sport (Coutinho et al., 2016). Creating specific detailed criteria of what constitutes a talented sports performer and providing a framework for an athlete's overall development remains the primary challenge in talent, talent identification, and talent development research (Coutinho et al., 2016). Talent is dynamic, and the development of talent is non-linear and requires a process of systematic individual development (Finnegan, 2020)

Researchers have agreed that many problems are associated with the talent identification of children and adolescents and that traditional models of athlete development are likely to exclude many late-developing potentially talented athletes (Vaeyens et al., 2008). Different systematic structures further complicate the difficulty in defining talent levels within and across sports at an amateur level (Larkin & Reeves, 2018). For example, Larkin and Reeves (2018) provided the example of a junior soccer player and an 800-meter runner. The player may play academy-level soccer at 16 years of age and then be selected for a national team representing their age group. The 800-meter runner may also be selected to represent their national age group. In both cases, the athletes are chosen to represent their respective national squads. However, the soccer player will have passed through two levels of talent identification, while the 800-meter runner will have only passed through one (Larkin & Reeves, 2018). Different sports can have very distinct and different pathways to the highest level of that sport, making it easier or more difficult for the athlete to reach one's potential.

Despite this lack of consensus, the term talent is commonly used throughout society. It is frequently applied (rightly or wrongly) across multiple domains in areas like education, music, acting and sports (Till & Baker, 2020). Talent may be used to describe biological predispositions

(e.g., a soccer talent), the quality or qualities being developed (e.g., nurturing a player's talent), or can be used to describe the players themselves (e.g., soccer talents) (Till & Baker, 2020).

Definitions of talent can also show to be both subjective and inconsistent. For example, Ommundsen (2009), as cited in Saether (2014), said that talent is “something you have, you are, you can be, or you can develop into” (Saether, 2014, p. 2). Gange (2000) believed that talent comes from natural abilities and is learned through inner and outer catalysts. On the other hand, Howe et al. (1998) argued that talent has genetic, transmitted, and intrinsic properties. Other researchers, like Saether (2014), stated that talent could be a static (fixed) or dynamic concept. The static (fixed) version of talent is something that was inherited. The dynamic piece was the talents or skills that the person could develop (Saether, 2014) or nurture. Singer and Janelle (1999) provided a definition that applied to static and dynamic features of talent. The static portion disposes of a specific combination of anatomical-physical characteristics, abilities, and other personality traits. In contrast, the dynamic portion of talent required specific training and other environmental conditions (Singer & Janelle, 1999).

Within a soccer context, clubs often rely on the subjective assessment of players by scouts, recruiters, or coaches (Bergkamp et al., 2019; Christensen, 2009) to determine what players merit selection to their clubs. Subjective assessments are often supported by what some researchers call a “shopping list” of critical criteria (Williams & Reilly, 2000). This is used to identify specific players that they believe could progress from the youth academy to the club's first team. Some of these criteria might include the use of acronyms such as TABS (Technique, Attitude, Balance, Speed), SUPS (Speed, Understanding, Personality, Skill), and TIPS (Talent, Intelligence, Personality, Speed) (Williams & Reilly, 2020). Different clubs might also look for

different qualities based on their philosophy of play, a team's positional needs, the club's values, or what they see as the profile of the ideal player.

There has been a shift towards more evidence-based means of identifying potentially talented athletes (Roberts et al., 2020). More objective data from advanced analytic metrics are being utilized (Bergeron, 2017; Eisenmann et al., 2020). There also appears to be greater use of sport-specific performance indicators (Hughes et al., 2012; Lorenz, 2013; Williams & Reilly, 2000). Till and Baker (2020) suggested that sports practitioners and researchers needed to establish which talent indicators were closely related to the potential to become talented within their sports system. They believed this would allow for more accurate talent identification and selection decisions.

Williams and Reilly (2000) also suggest potential talent predictors for soccer players. Talent predictors were thought to be helpful for talent evaluators by confirming initial perceptions of an individual player's strengths and weaknesses (Williams & Reilly, 2000). Their research summary included talent identification considerations in physical (e.g., height, weight, muscle size, etc.), sociological (e.g., parental supports, education, cultural background, etc.), physiological (e.g., aerobic capacity, anaerobic endurance, anaerobic power, etc.), and psychological (e.g., attention, decision making, confidence, creative thinking, etc.) domains (Williams & Reilly, 2000). All these primary predictors would be considered foundations within a balanced approach to child, adolescent, and athlete development. However, with the Williams and Reilly (2000) study being more than twenty years old, there appeared to be a limited understanding of current processes and influences, which may help or inhibit players from being identified as talented (Larkin & Reeves, 2018).

One solution suggested by Till and Baker (2020) that could help define talent was to position the definition away from the idea that talent is a fixed and measurable trait. They thought that talent should be broken down into the following sub-categories: (1) emergent – the process of becoming, (2) influenced – by a host of factors within an environment (i.e., parents, coaches, peers, and opportunities); and (3) individual - athletes with different abilities and skills requiring different developmental programs (Till & Baker, 2020). In their opinion, these sub-categories would help establish a more apparent philosophy for sports that valued a Long-Term Athlete Development (LTAD) model over short-term performance outcomes (Till & Baker, 2020).

Definitions associated with talent identification and development can also be contentious among researchers. Talent identification methodologies can be subjective and not evidence-informed, leading to gaps in what would be considered best practice (Larkin & Reeves, 2018). Seward et al. (2020) referred to talent identification in soccer as the interlinking and ongoing process of recognizing young players with the potential to become elite senior players. Williams and Reilly (2000) understood talent identification as recognizing current participants with the potential to become elite adult-aged players. Furthermore, talent identification has also been documented as recognizing and selecting exceptionally talented athletes to provide them with opportunities to accelerate their development (Johnston et al., 2018; Vaeyens et al., 2008).

According to Till and Baker (2020), a talent identification decision aims to identify a developing athlete with the potential to become a successful elite performer in their respective sport. Researchers like Gesbert et al. (2021) and Dugdale et al. (2020) felt that talent identification was critical to modern sports clubs because of the financial and human resources committed to it. This is especially true in a professional soccer where athletes play the sport as a

career. At professional levels of the game, a significant amount of money and human capital is tied to team results and the buying and selling of players. These investments continue despite a high turnover of youth players reported in professional soccer academies (Dugdale et al., 2020). Only 10% of players from professional soccer academies are successful in obtaining a professional contract (Dugdale et al. 2020; Grossmann & Lames, 2015).

Lower-level clubs and community-based programs also undertake talent identification for different means, just with fewer resources and support. For instance, at local levels of sport, volunteers or parent-coaches with varying levels of coaching experience and education may have to select players to make up a local youth team roster. These talent identification decisions at a local level may impact selection decisions at higher levels of the sport because local levels of the sport would be considered a step on the talent development pathway and an avenue for players to gain exposure to recruiters, scouts, or coaches from a higher level. Therefore, selection decisions made at all levels of the sport have a significant impact on the future direction of all athletes and open opportunities for players looking to move to a higher level of the game.

According to Gesbert et al. (2021), while talent can be considered multidimensional and dynamic; most young soccer players will not automatically translate into high-level performers. Similarly, Till and Baker (2020) explain that athletes continuously develop through numerous processes and interactions with their environment. Talent development is primarily about providing players with the most appropriate learning environment to realize their potential (Seward et al., 2020). However, talent development should also aid the individual athlete in gaining the expertise and experience needed to satisfy the unique attributes required to be a successful performer in a sport (Phillips et al., n.d.) and life.

Many researchers suggest that talented soccer players must be highly prepared through an advanced learning environment to translate their potential into actual achievement (Gesbert et al., 2021; Collins & McNamara, 2017; Williams & Reilly, 2000). For example, Phillips et al. (2010) thought that talent development programs should emphasize an individualized pathway from novice levels (i.e., grassroots) to expert levels (i.e., high-performance or professional). They believed individualized programs would identify and remove constraints preventing individual athletes from reaching their potential. This would be more effective than evaluating current performance levels based on physical tests (Phillips et al., 2010).

One reason talent identification and development can be complex in team-based sports like soccer is the different qualities associated with performance. Qualities include physical, physiological, technical, and tactical attributes and psychological and sociological influences (Larkin & O'Connor, 2017; Meylan et al., 2010). For researchers like Vaeyens et al. (2008), this would reason why coaches should transfer efforts away from talent identification and development to focus predominately on enhancing the talent development environment and athlete guidance.

According to Williams and Reilly (2000), a quality talent development environment implies that an athlete is provided with a suitable and positive learning environment. A positive learning environment may be impacted by many factors, including birthplace, socioeconomic status (SES), sporting policy, support from family and peers, coaching and staff behaviour, and the talent development program itself (Mills et al., 2014). A quality talent environment would encompass all coaching situations and the athlete's surroundings (Gesbert et al., 2021).

Understanding the components of a quality talent development environment is essential because it is the most controllable part of the talent identification and development processes (Gesbert et

al., 2021; Mills et al., 2014). It is likely the most influential determinant of whether or not an athlete will reach their potential and progress to higher levels of any sport.

Till and Baker (2020) described a talent development environment in four parts: (1) the discovery of potential performers who are not currently involved in the sport in question (talent detection), (2) recognizing participants with the potential at an earlier age to become elite performers in the future (talent identification), (3) providing athletes with a suitable learning environment to accelerate or realize their potential (talent development), and (4) the ongoing process of identifying individuals at various stages of development who demonstrate specific abilities (talent selection). They also included a concept called *talent transfer*, which focuses on transferring athletes from one sport to another when there might be a better opportunity for the athlete to succeed (Till & Baker, 2020).

Understanding athlete perspectives and individual needs are critical for clubs, teams, and sporting organizations to maintain a safe and inclusive learning environment that positively affects athlete well-being (Gesbert et al., 2021; Mills et al., 2014). A player-centred environment that promotes personal responsibility and establishes clear pathways to higher levels would be considered further principles that characterize suitable talent environments (Gesbert et al., 2021; Mills et al., 2014).

1.2 Talent Development in Canada Soccer

Maximizing the efficiency of the player development system is a strategic priority for soccer clubs and associations (Sweeney et al., 2022). The talent development environment in Canadian soccer consists of several distinct yet somewhat unrelated groups (Holt, 2002). A variety of development systems are set up and funded by professional soccer clubs, the National

Sport Organization (NSO) – Canada Soccer, the Provincial Sport Organizations (PSO), local-level community clubs, and increasingly, sports entrepreneurs who operate private academies.

Although it is considered an American league, three Major League Soccer (MLS) franchises (Vancouver Whitecaps, Toronto FC, and Club de Football Montreal) operate in Canada (Canada Soccer, n.d.). Each MLS franchise has a youth academy dedicated to developing youth players. Although many of these players are selected for youth national teams, these professional clubs have talent programs that are not coordinated with the NSO (Holt, 2002). The Vancouver Whitecaps have partnerships with many PSO programs to provide a network of academy centers that identifies young talent for their Boys MLS academy and the Girls Elite Rex program. (Vancouver Whitecaps, n.d.). A newly formed (2019) men's professional soccer league in Canada called the Canadian Premier League (CPL) has eight franchises (Halifax Wanderers, York United [Toronto], Atletico Ottawa, Forge FC [Hamilton], Valour FC [Winnipeg], and Pacific FC [Victoria], and Vancouver FC) with the anticipated addition of the eighth and ninth franchise in Saskatoon, Saskatchewan, and Windsor, Ontario tentatively scheduled to begin to play in 2023-24 or 2024-25 (Canada Soccer, n.d.). Despite reasonably low player salaries and limited resources, the CPL is Canada's only full professional member league and has seen some success moving players to more prominent soccer leagues (i.e., MLS, the Scottish Premier League, and League One in England). CPL currently does not have an official academy system like MLS franchises do, but some CPL franchises sponsor some forms of locally based youth development programming such as a "high performance" training program as an add-on to the training a player receives with their local club. Some teams like Halifax and Cavalry F.C. have created Under-23 programs, that act similar to a feeder team to the first team.

Despite many calls for a similar CPL-like structure for women, there is not a full professional soccer league in Canada for women. However, former Canadian Women's National Team player Diana Matheson and current Canadian Women's National Team captain Christine Sinclair have announced plans to start a Canadian professional women's league in 2025 under a business entity called *Project 8*. Several Canadian-born players play in prominent professional women's leagues in Europe and the National Women's Soccer League (NWSL) in the United States. In addition, the Vancouver Whitecaps (MLS) operate a high-performance excel program for Under 13 – Under 18 female players that feeds into Canada Soccer's Women's National EXCEL Program in conjunction with a boys' academy that operates from Under 13- Under 19 . Despite progression, there is still a clear divide in access to high-performance, top-of-the-development pathway opportunities for men compared to women and access to these types of programs when comparing Canada to other top Federation International Football Association (FIFA) nations.

U Sport administers competitive sports between member universities in Canada. There are 48 men's soccer teams (U Sports: Men's Soccer, n.d.) and 53 women's soccer teams (U Sports: Women's Soccer, n.d) divided into four regional conferences. The CPL draft is open for U Sports men's soccer players who have declared themselves available to be selected. Those with remaining U Sport eligibility can sign CPL development contracts without affecting their U Sport eligibility. The Canadian Collegiate Athletic Association (CCAA) also has men's and women's divisions, with teams divided into six-member associations (CCAA Soccer, n.d.). Two regionally based semi-professional/development level leagues are League 1 (L10) in Ontario and the Premiere Ligue de Soccer du Quebec. The United Soccer League (USL) operates as a professional league below MLS in the USA. It administers an amateur USL League Two (USL2)

that aims to allow collegiate players a competitive league to play in during the collegiate/university off-season without jeopardizing their National Collegiate Athletic Association (NCAA) eligibility. Three Canadian teams are based in Manitoba, Alberta, and British Columbia and play in different conferences in this league. This Premier Development League (PDL) is designed to prepare under-23 college players for higher competition (Holt, 2002). These leagues all have a place on the talent development pathway towards becoming a full-time professional player at the peak of the pathway.

The PSOs play a vital role in developing young players, identifying talented athletes, and providing access to qualified coaches and competitive opportunities (Holt, 2002). Provinces have a variety of amateur youth leagues and competitions, each with different levels/standards of play. PSOs operate programs for excelling players that increase their exposure to higher levels of play (i.e., professional academies, universities, and national team programming). Prior to the early 2000's, the PSOs often selected players to attend one of five National Training Centres (NTC) across the country. According to Holt (2002), organizing training sessions for provincial teams and NTCs was logistically challenging because of travel and finances. As a result, quality players would often choose to play with top amateur local clubs and teams rather than pursue opportunities with the NTCs (Holt, 2002). Currently, Canada Soccer operates an EXCEL program that brings together the most talented Under-15 to Under-18 players inside Regional EXCEL centres (Canada Soccer, n.d). It is a two-tiered talent identification system with localized regional centers positioned across the country with the intent of ensuring that more players receive more high-quality development hours (Canada Soccer, n.d)

There is also an emerging trend of sports entrepreneurs operating private academies, travel teams, and scholarship identification programs outside local clubs and leagues. These programs

require fees for service that pay for a player's access to coaching and further development opportunities (Holt, 2002), or exposure to talent recruiters or selectors. School boards and private schools have also, in some cases, developed soccer programs to align with their educational agendas (Holt, 2002). Sports schools are school-based programs where sports training/competition is provided during the school day as part of the student's education (Way et al., 2010). These types of schools allow for flexible education options so athletes can focus on training and schooling. With educational policies in many Canadian provinces changing and allowing more freedom to choose a school for children, many schools and districts have developed specialized sports programming academies to make their schools more appealing to parents. (Way et al., 2010). The requirements of these programs often lead to exclusion as they cater to players who can pay registration fees or players who meet the academic requirements of attending the school.

1.3 The Talent Development Pathway in Canada Soccer

Soccer has traditionally been one of the highest participatory sports in Canada (Statistics Canada, 2019). Canadian soccer, however, has yet to produce sustained and significant numbers of globally recognized players, and national youth and senior teams have been unable to achieve consistent success at the international level. Canada's senior men's and women's teams have given supporters optimism with recent achievements. The Canadian women won gold in the 2020 Summer Olympics soccer tournament. The senior men's team became only the second Canadian team to qualify for a men's World Cup (Qatar 2022). The term success, like talent, however, could be considered loaded because it could mean different things to different people in a sporting context.

Recent accomplishments of the senior teams are only a tiny snapshot of Canada Soccer's competitive record over the program's history. Many senior team players were identified or developed by participating in programs outside Canada. Some players would also be considered dual citizens who qualify for the national team based on a parent or grandparent born in Canada. For example, current Men's National team forward Jonathan David was born in the USA to Haitian parents, moved to Canada at age 6, then moved to Europe to continue his playing career. Despite being eligible for several countries, David chose to represent Canada. Former Women's National team player Lauren Sesselmann was born and raised in the United States but was able to play for team Canada because her father was born in Newfoundland and Labrador. Canada has also lost prominent players, like Fikayo Tomori (England) and Sydney Leroux (United States), to other countries National Team programs because of the FIFA rules surrounding dual citizens. Some of these dual-citizen players may have never been to Canada before actually representing the national team.

The current adult national teams sometimes comprise of many players who were not born and were not developed in the country. Instead, they qualified for selection based on factors such as the 'grandfather rule' (Andrew et al., 2020). Significantly few Canadian-born players have developed solely through the talent development pathway in Canada and found opportunities in one of the top leagues in FIFA. Many of the top men's players have left Canada at a youth age to pursue academy opportunities in Europe or University/College scholarships in the United States as a progression path to professional soccer. In the women's game many players play NCAA soccer in the United States as a progression point to the NWSL or a European Professional Club Team. One of the few Canadian men's players who played youth soccer in Canada, professional soccer in Canada, and then moved to a top-FIFA league would be Alfonso Davies. Davies, who

immigrated to Canada from Liberia when he was young, played his youth soccer in Edmonton, Alberta before moving to the Vancouver Whitecaps and then transferring to Bayern Munich in Germany. Also, recent CPL graduate, Victor Loturi, played youth soccer in Calgary before playing with Cavalry FC's Under-23 and first team's before moving to Scotland's Ross County in 2022. The majority of National team players have to leave Canada and utilize European or American talent pathways to reach their goals and ambitions. On the women's side, midfielder Desiree Scott is a rare example of a player who progressed from a Canadian USport team (University of Manitoba) to be called-up to the Senior Women's National Team. The majority of Women's National Team players play NCAA soccer in the United States, in the NWSL in the United States or a European professional team before playing for Canada.

Although winning a CONCACAF Gold Cup in 2000, Canada's men's senior national team tournament results have fallen short of expectations. Before 2022, the senior men's national team program qualified for only one World Cup, in 1986, and last qualified for an Olympic Games (an under-23 competition) in 1984. Canada boys' youth teams have performed poorly at the Under-17 and Under-18 World Cups and inconsistent at the CONCACAF youth competitions. Although some current members of the Canada men's senior national team are globally recognized and playing with big European clubs (e.g., Alphonso Davies of Bayern Munich and Jonathan David of Lille in 2022), the overall number of top-level players available for selection is small. Many top national team players at the youth and senior levels received much of their soccer education and training at professional academies in more established soccer countries like England, Spain, and Belgium. Other young players like Alistair Johnston (Canada Men and Celtic FC, Scotland), Ashley Lawrence (Canada Women and Paris Saint-Germain,

France) and Julia Grosso (Canada Women and Juventus, Italy) have used Division I NCAA soccer in the United States as a jumping point to professional leagues.

The women's senior national team's recent successes differ from the men's team context. There has been significant growth in women's professional and international soccer globally (Glamser & Vincent, 2004). While Canada's women have been consistently ranked in the top 10 of the FIFA rankings, other countries have improved dramatically in a brief period, likely due to increased sports development funding. Despite winning a gold medal at the Tokyo 2020 Olympics and back-to-back bronze medals in the London 2012 and Rio 2016 Olympics, the women's national team has had different FIFA Women's World Cup results. A FIFA World Cup features more travel and greater diversity and strength of teams participating. In terms of major tournaments, the FIFA World Cup can be considered a much stronger indicator of program performance than the Olympic Games. The World Cup has a greater number of teams participating in it. The men's tournament will have 48 teams competing at the 2026 World Cup compared to 16 teams at the Olympics. At the 2023 Women World Cup there will be 32 teams compared to 12 at the Olympic Games. It is also important to note that men's Olympic tournament is considered an Under-23 tournament but teams are allowed 3 overage players meaning most of the top players in the world do not participate in this tournament.

The Canadian women's national team also has a relatively easy qualification route to significant tournaments since other CONCACAF nations, except for the United States, are well behind the rest of the world in term women's soccer development. Very few Canadian women play in major European professional women's leagues, and only fourteen Canadian women participated in the National Women's Soccer League (NWSL) in 2020-2021. Canada has no women's professional league, so college soccer in the United States (NCAA) is often the

jumping point for Canadian women's players into full professional leagues or national teams.

Often, the national team gives players exposure to opportunities with professional teams and not the talent development system.

Registration numbers in Canada Soccer's most recent reporting (Canada Soccer, 2020) reflect the realities of the global COVID-19 pandemic. Registration figures in 2020 indicated 269,250 registered players (Canada Soccer, 2020). Of that, 52.4% were male youth, and 31.2% were female youth (Canada Soccer, 2020). The 2019 Annual Report and 2022 Annual Report provides demographic information from before and after the COVID-19 pandemic. It listed the total number of registered participants in Canada at 784,386 (Canada Soccer, 2019). The 2022 Canada Soccer Annual Report noted that there were 689,938 total players registered in Canada with 575,768 of them being youth aged. Of the registered youth aged players 358,671 were male, 217,086 were female, and 11 were non-Binary. The Canadian Youth Sports Report (2014) listed soccer as the second most popular activity for Canadian youth behind swimming and the most popular team sport. Statistics Canada's Sports for Fun and Fitness (2019) highlighted soccer as one of the most popular sports in Canada.

In 2012, Canada Soccer released the *Wellness to World Cup* strategy that set targeted goals consistent with other top global soccer nations (Canada Soccer, 2007). One of the action items from this report was that Canada Soccer needed to implement a well-defined development pathway based on LTAD (Canada Soccer, 2007) for more youth players to move to higher levels of the game. Since then, Canada Soccer has made great strides in improving the delivery system by redeveloping and expanding a coach education/licensing program, establishing a new club-licensing program, and creating a men's professional league (CPL). *The Canadian Soccer Pathway: LTPD Community Guide* (Canada Soccer, n.d. provides a roadmap for players of all

ages and aspirations who want to play soccer at the recreational, competitive, or high-performance level to encourage lifelong participation. This set of guidelines is based on the LTAD model. Stages 4 to 6 are considered a pathway into competition for adolescent-aged players (Canada Soccer, n.d. b). Official league standings are introduced at this stage, and the games become more competitive with an emphasis on strategy and tactics (Canada Soccer, n.d. b). Training time over these stages increases, and there is a move to larger-sided games, year-round play, and further high-performance development opportunities (Canada Soccer, n.d. b).

Canada Soccer makes implementing a talent development environment primarily the responsibility of the provinces by empowering them to make player development decisions and apply concepts of the development pathway and LTAD to their localized context(s) (Canada Soccer, 2017). This concept is constant across Canadian sports and how NSO to PSO relationships are organized. As a result, talent development in Canada can be complicated, disjointed, and lack a professional structure, inhibiting the development of young players (Holt, 2002). Many higher-ranking FIFA nations, including England and X, have significantly fewer populations and registered numbers of soccer players when compared to Canada (Canada Soccer, 2007).

In most high-performing soccer systems, professional clubs assume the primary role of talent developer, not the national team program or the provincial/regional governing bodies (Holt, 2002). One example of this is in England. Elite youth soccer in England is characterized by a highly pressurized climate for success (Sagar et al., 2010). Because of that, young players encounter a variety of personal and interpersonal challenges within the academy environment to further their development (Mills et al., 2012). Elite youth players are exposed to talent identification and development processes primarily based on scouting and recruitment to

academies affiliated with professional clubs (Seward et al., 2020). Academies are unique training structures set up and funded by professional clubs with the primary objective of developing players to the professional level (Mills et al., 2014). Once recruited, academies attempt to provide players with a systematic coaching and support program (Seward et al., 2020). Between the ages of 9 and 16, young players join an academy on ‘schoolboy’ terms (i.e., part-time attendance) (Mills et al., 2014). At 16 years, those players who show real promise are selected to undertake a two-year full-time youth training program known as the academy scholarship (Mills et al., 2014). Upon completion of the scholarship, players are either signed to a professional contract or released from the club (Mills et al., 2014).

It appears that Canada’s talent development system for soccer is disjointed with many competing priorities. Despite Canada having large number of registered soccer players, many National team players on both the Men’s and Women’s sides have to leave the country to pursue their sporting goals. Considering the talent development environment is a critical component of talent development it justifies further investigation to why Canada’s talent pathway is not producing significant numbers of talented players.

1.4 Study Rationale

Elite youth soccer has had an increasing amount of research dedicated to talent identification and development (Mills et al., 2014). This is partly due to the extent to which soccer clubs and sports organizations have invested substantial resources into their search for players who have the potential to excel (Bergkamp et al., 2020). The financial and commercial rewards of winning sports competitions, avoiding relegation, or even producing players capable of playing at high levels mean that significant resources must be invested annually within national governing bodies and professional sports clubs to achieve success (Till & Baker, 2020).

Considering the investment of resources made by sports organizations and the families of youth athletes to achieve success, it is necessary to determine how we may better understand talent identification and talent development processes. Also, numerous physiological, psychological, and social factors can affect understanding, identifying, and developing future athletic talent (Till & Baker, 2020).

The development system is affected by the amount and allocation of resources. More research needs to consider how system resourcing influences talent identification and development (Till & Baker, 2020). While some talent development environments have substantial resources to develop, deliver and support their programs (Till & Baker, 2020), others do not, affecting their athletes' development. Recognizing what these environments can do to help youth athletes achieve their potential is needed.

Predicting future sports performance is inherently multifaceted and complex, where a youth player's developmental trajectory is rarely linear (Bergkamp et al.,2020). The need for further investigation into understanding the complexities of talent identification and talent development in soccer is reflected in FIFA's (2020) *Give Every Talent a Chance – FIFA's Analysis of Talent Identification and Talent Development Ecosystems*. This document intends to increase soccer's global competitiveness by identifying and reducing youth soccer players' constraints in reaching their fullest potential (FIFA, 2020). The points made in this document provide a starting point for discussions about Canada Soccer's talent development environment and the talent identification and development processes utilized compared to other nations within the global soccer ecosystem.

Investigating talent identification and talent development within Canadian youth soccer might clarify the scientific, methodological, and ethical challenges that hinder youth athletes at

the development stage of LTAD. Soccer in Canada provides an interesting context because the sport has largely struggled to progress significant numbers of players to the highest level of the men's and women's games despite having high participatory numbers at the youth level across the country. Other sports like ice hockey and basketball are asked to deal with the same complex realities and challenges of talent identification and talent development in their contexts and how these processes affect competitive results at older age levels. Other sports could consider the findings of this study within their specific contexts. Talent identification and talent development principles in youth are consistent in all sports. Constraints affecting these processes (e.g., growth and maturation, selection biases, socio-economic factors, etc.) influence all youth athletes, not just those in soccer. A practitioner or researcher focusing on another sport may look at the results of this study and see how it might apply to their situation or context. If the goals of a youth sports organization are player centred and focused on development, they will want to put as many players as possible in the position to reach their potential and progress to advanced levels of the game. It is likely that similar conditions (i.e., age categories, competition, etc.) and barriers (i.e., geography, size of the player pool, etc.) influence athlete progressions through Canada Soccer's talent pathway. Other sports can consider their circumstances about the perspectives reported in this study and potentially improve how opportunities are made available to athletes in their talent identification and development systems.

As the next chapter will demonstrate, there appears to be a strong desire for more research into talent identification and development. Canada Sport for Life (2019) has indicated in their Long-Term Athlete Development (LTAD) framework that they encourage research into all aspects of LTAD, including adopting and aligning its principles and values to sports organization programming. Beaudoin et al. (2015) also confirmed by studying how coaches in Canada adopt

and implement LTAD that additional research is warranted to develop and understand how the LTAD framework is adopted, implemented, and confirmed over time by organizations and individual practitioners. Holt et al. (2018) reported that Canadian PSOs preferred to have more research to examine issues related to athlete development systems, participation and retention, and practical coaching approaches. These are critical aspects affecting youth sports talent identification and development processes.

Till and Baker (2020) identified several challenges and solutions to talent identification and development in sports. Most talent identification and development studies have focused on athletes' anthropometric and physical characteristics. Research is very limited in investigating other cognitive, perceptual, and psychological influences. They also suggested that there was little research focusing on how talent identification and talent development might be applied by those working on the frontlines of talent identification and talent development (e.g., talent identification/development managers, coaches, scouts, and support staff) in terms of optimizing their talent identification and talent development practices (Till & Baker, 2020). By investigating factors influencing youth soccer players' development in England, Mills et al. (2012) also noted that studies had focused explicitly on coaching populations, and talent identification and talent development are less prolific. Coaches were selected for this project because they are directly responsible for most talent identification and talent development programs in Canadian youth soccer. Coaches would understand talent identification and talent development process from the completion of licensing programs, professional development, and their experience coaching.

1.5 Aim of the Study

The specific aim of this study is to investigate the factors and constraints that influence talent identification and talent development at the developmental stage (i.e., under 15 to under

17) of the Canada Soccer talent development environment. As explained in detail in Chapter 3 (Methodology), this research involves semi-structured interviews and analysis of the responses of coaches who meet the inclusion criteria for the study. From the data collected, issues considered relevant from the coaches' perspective are identified, analyzed, and reported on in Chapters 4 and 5. In addition, the study considers the coaches' opinions if they feel that there is equity and inclusivity in the talent identification and talent development processes for potentially talented youth soccer players in Canada. Those thoughts might indicate reasons why Canada Soccer might miss out on potentially talented players. In Chapter 6 (Conclusions) future research opportunities are identified that may help sports practitioners improve Canada's output of high-performing soccer players and teams or will apply the findings to other youth sports contexts.

1.6 Objectives

To achieve the aims of the study, the following objectives are set:

- To investigate how youth soccer coaches in Canada understand and approach talent identification and development.
- To understand how complex challenges and factors associated with talent identification and talent development processes affect the talent development environment in Canadian youth soccer.
- To examine the accessibility and inclusivity of talent identification and talent development processes for Canadian youth soccer players.
- To identify priorities and make recommendations to improve the talent development environment in Canada Soccer.

1.7 Research Questions

To address the objectives of this study, the following research questions guide the study:

- In the context of the Canadian system, what considerations do youth soccer coaches make when identifying and developing talented youth soccer players?
- What constraints affect the identification and development of talented youth soccer players in Canada?
- What opportunities and barriers influence how accessible and inclusive talent identification and talent development processes are to youth soccer players in Canada?
- What can Canada Soccer prioritize to increase the number of talented players developed and identified in Canada?

1.8 Potential Research Contributions

The study has several potential research contributions. First, the findings and knowledge gained from this study could be transferable to other youth sports. Talent identification and development principles should be consistent across different sporting contexts. The constraints affecting these processes are not specific to one sport. Practitioners in another sport may look at the results of this research and see how the coach's perspectives apply to their particular context.

Knowledge translation is a dynamic process involving interactions between researchers, engaged community members, and decision-makers to provide more effective policies, programs, and practices (Holt et al., 2018; Straus et al., 2013). Shared information will improve coaches' ability to identify and develop more talented players. Coaches between sports often share ideas that may affect their coaching practice, tactics, and player management. If there are commonalities in the perspectives provided by the soccer coaches, other sports coaches may be able to link these issues to their practice. Shared knowledge between sports coaches and practitioners benefits athletes and helps create player-centred training environments.

It is well established that talent identification and talent development are complex processes influenced by many factors that may be individualized. Constraints affecting talent development and identification can come from numerous variables that determine everyone's developmental trajectory (Phillips et al., 2010). The themes generated from this study could expand on current research and add to previous research studies. For example, Till and Baker (2020) stated that little research considered how sport system resources influence talent development environments. This study could provide some insight into youth sport delivery systems in Canada and how to improve access to talent development environments. The coaches' perspectives could provide additional insight into the challenges and barriers faced by youth soccer players as they look to progress through the development pathway presented by Canada Soccer.

Although numerous studies focus on talent identification, only some have paid attention to the criteria coaches use to identify soccer talents (Pankhurst & Collins, 2013; Saether, 2014). Bergkamp (2021) indicated that more needs to be known about how scouts and coaches address issues in talent identification in elite soccer. The study focuses on youth soccer coaches' talent identification and development perspectives. It could provide some directions on how coaches can better identify future talents and use selection criteria to improve the accuracy of decisions.

Finally, women's soccer has rapidly grown in popularity, with thirty million participants worldwide, making it one of the world's most popular women's sports (FIFA, 2015). Despite these high levels of participation, there remains a lack of research focusing on development activities by elite women players (Henry et al., 2019). The structures for women athletes have often been created without looking at gender differences (e.g., physical and cognitive) between men's and women's games (Curran et al., 2019). Although there is extensive literature about

talent development in soccer, data about women's soccer is lacking (Curran et al., 2019). The data collected in this study will consider the perspectives of coaches involved in the men's and women's games. This may provide information about the implementation of gender-specific talent development pathways. The findings might also be used to drive decisions about resource allocation, pathway structures, coaching, and competition in both men's and women's soccer to reflect specific populations' needs (Curran et al., 2019).

Chapter 2: Literature Review

2.1 Theoretical Background in Talent Identification and Talent Development

The following literature review focused on research about talent, talent identification, and talent development. Literature about theoretical frameworks, aspects of quality talent development environments, and system level constraints on talent identification and talent development was analyzed over a one-year period. Articles were searched for using Google Scholar, the University of Manitoba Libraries database, and a scan of available resource documents from organizations like Canada Soccer. Unless the article specifically referenced the gender being studied, it was assumed by the researcher that the author of the article was writing from a gender-neutral lens. There was a vast amount of literature found, articles and studies were used based on the richness of available data. While some articles specifically focused on soccer, many articles focused on sport in general or other sports like rugby, basketball, or hockey.

2.1.1 The Concepts of Deliberate Practice and Deliberate Play

There are many existing models of talent development to consider when the goal of sports practitioners is to maximize the athletic potential of youth (Lloyd, 2015a). These models examine talent development through either a genetic (nature) or an environmental (nurture) lens. There is not, however, a “one size fits all” structure considered ideal or successful for developing all athletes and for all sports environments (Lloyd, 2015a). The two most prominently debated concepts in talent development are deliberate practice and deliberate play.

Ericsson et al. (1993) stated that the most effective learning occurred through involvement in large amounts of deliberate practice (Ward et al., n.d.). Deliberate practice is defined as a highly structured activity to improve performance. These activities require much effort and could be more enjoyable for the participant. Another way of describing deliberate

practice would be that it is a high-quantity and high-concentration practice that is not intrinsically motivating for the participant (Côté & Hancock, 2014; Fuschslocher et al., 2013). Expert performance through deliberate practice methods depends on the quantity of practice and the specific forms of practice applied to skill development (Fraser-Thomas & Côté, 2006). While this model specifies that everyone is capable of high performance, it does not consider other variables that have been shown to influence talent development (Fuschslocher et al., 2013; Henriksen et al., 2010; Vaeyens et al., 2008).

The theory of deliberate practice offers a controversial explanation for developing expertise (Ward et al., n.d.). Ericsson et al. (1993) believed optimal learning and improvement could only occur when performers focused on, persisted in, and tolerated high amounts of specific, appropriate, and pertinent practice. The long and intensive training periods are a precursor to attaining expertise (Ward et al., n.d.), and the motivation to practice comes from the belief that practice improves performance. An example would be a self-directed practice, such as an individualized training session where the athlete performs the same skill repeatedly (Ford et al., 2009). In a team sport like soccer, practices typically take place with others to replicate and improve the specific demands of the sport (i.e., perceptual, motor, cognitive, etc.). These team practices are critical to future performance attainment (Ford et al., 2009; Helsen et al., 2021; Hodges & Hendry, 2019) for individuals and teams. A significant part of Ericsson et al. (1993)'s description of deliberate practice was that the best performers accumulated, on average, over 10,000 hours of deliberate practice. The 10,000-hour rule has been criticized because no specific practice time guarantees expertise (Fraser-Thomas & Côté, 2006). Although the rule was not initially intended to be applied to sport, it can be argued that 10,000 hours is neither necessary nor sufficient for achieving elite sport performance. A coach cannot select a random athlete,

expose them to 10,000 hours of deliberate practice, and ensure that the athlete becomes talented or reach elite status. There are too many factors that impact what level of performance a youth athlete can attain. It may even come down to luck.

Ericsson et al. (1993) also suggested that effective learning occurs when activities are well defined, are pitched at an appropriate difficulty level, and when helpful feedback is presented to the learner. The opportunity for repetitions, error detection, and correction is also provided. Three constraints are highlighted when considering these pieces of deliberate practice inherent to attaining expert sports performance. First, substantial resources are required at the performers or their parent's expense . Second, deliberate practice is physically and mentally demanding on a performer because the highest degree of effort is required to participate in these activities . Thirdly, where deliberate practice is assumed not inherently enjoyable, the motivation to sustain participation in such activities is primarily determined by the person's intent to improve. It is common knowledge that many athletes find appropriate practice and training enjoyable and motivating across all development ages (Phillips et al., n.d.).

Deliberate practice has been recognized as an essential component of talent development in sports (Baker & Young, 2014). However, many have criticized the theory because a linear relationship between the amount of practice and skill/talent attainment does not account for athlete development's multi-dimensional and dynamic nature. The efficacy of early selection/specialization approaches associated with deliberate practice has also been linked with significant negative physical and psycho-social impacts on youth athletes (Collins & McNamara, 2017).

The theory of deliberate play contrasts with the ideas presented by Ericsson et al. (1993) focusing on deliberate practice. One notable difference is that deliberate play emphasizes early

exploratory physical activities that are intrinsically motivating and maximize enjoyment and fun (Lloyd et al., 2015a). Theories of deliberate play suggest that if an individual is to become skilled in an area, there must be regular engagement in playful pursuits and practice in non-domain specific activities (Ward et al., n.d.). These activities are critical during the early stages of an athletic career (Ward et al., n.d.), where enjoyment and motivation are critical for continued participation in sports.

A considerable amount of evidence suggests that athletes with a diversified early sporting experience and who regularly engage in deliberate play are more likely to achieve higher levels of sports performance (e.g., Witt & Dangi, 2018; Till & Baker, 2020; Fraser-Thomas & Côté, 2006; Larkin & Reeves, 2018). Expert and ‘world-class’ athletes often engage in considerably more deliberate play during their sampling years (7-12 years old) than non-experts (Ward et al., n.d.; Thomas & Côté, 2006). Sampling years were thought to be periods where deliberate play and diversity were encouraged and beneficial to sports development (Ward et al., n.d.; Thomas & Côté, 2006). Participating in various sports allows children to experience different environments and target multiple learning domains (e.g., physical, cognitive, affective, and psychosocial). It also suggests that the skills developed through diversified sport participation are transferable to other sports where an athlete may later specialize. As the athlete progresses in sport, there is a shift from pleasurable participation and play to a more focused set of activities to enhance performance through specialized training (Côté et al., 2007). Intrinsically motivating behaviours early in sports development are likely to increase the person’s eagerness to pursue more externally controlled activities (Ward et al., n.d.) during the specialization stage.

Côté et al. (2007) suggest three additional types of sports activities that can be included along the pathway between deliberate practice and deliberate play. The first is play practice,

which shares most of the characteristics of deliberate practice but emphasizes fun and games (Coutinho et al., 2016). Secondly, spontaneous practice is organized by children in their free time as a form of deliberate play. It is informal but intends to improve sports skills (Coutinho et al., 2016). Thirdly, organized competition is an activity that is highly enjoyable but needs to be explicitly structured to improve performance (Coutinho et al., 2016). It requires high concentration and is often led by adult supervision (Coutinho et al., 2016). Given that expert soccer players tend to engage in more play than practice during childhood and accumulate more hours in play than their less accomplished peers, it is possible that finding ways to maximize opportunities for street or playground soccer during childhood can be a method of deliberate play (Hendry & Hodges, 2019).

2.1.2 DMGT and the DMSP

The Differentiated Model of Giftedness (DMGT) proposed by Gagne (1995) distinguished between potential and achievement while recognizing elements of talent. This model was formulated as a counterpoint to the deliberate practice model. It highlighted the importance of the childhood stages of LTAD about continued sport participation. The development process in DMGT is described as transforming gifts into talent (Vaeyens et al., 2008). There is a clear distinction between what gifts (aka natural abilities) are and what developed abilities (aka talents) are. DMGT proposed that for an individual to translate their gifts into talents, they would have to engage in a systematic training and practice learning process (Lloyd, 2015a). DMGT also suggested a clear distinction between essential elements (i.e., giftedness) and products of development (Vaeyens et al., 2008). Such learning or practice seeks to develop intellectual, creative, socio-affective, and sensorimotor aptitudes to maximize talents. (Vaeyens et al., 2008). Giftedness describes the possession and use of high levels of natural

ability to a level amongst the top 10% of same-age peers (Vaeyens et al., 2008). The term talent would be described in DMGT as the mastery of developed competencies belonging to the top 10% of those active in that field (Vaeyens et al., 2008). DMGT presented a constructive framework that clearly defined and recognized determinants of talent and how it emerges from natural gifts. (Vaeyens et al., 2008).

Another component of DMGT is the intrapersonal and environmental catalysts that influence the development process. The intrapersonal catalysts are subdivided into psychological and behavioural attributes (Vaeyens et al., 2008; Mills et al., 2014; Gulpin et al., 2013). Environmental catalysts exert their influence in many ways (e.g., cultural, social, and familial) on a variety of individuals (e.g., parents, teachers, and peers) and provisions (e.g., curriculum, programs, and services) (Vaeyens et al., 2008; Mills et al., 2014). Aspects of these catalysts can interact with each other and affect the development process.

Although initially developed for education, Gagne's model applies to sports. It recognizes that chance (i.e., favourable genetics), an individual's environment (e.g., birthplace, socioeconomic status), and uncontrollable events (e.g., accidents, injuries) can influence development (Mills et al., 2014). While DMGT acknowledges nature and nurture, it reflects a more multi-dimensional approach that represents the current consensus surrounding talent development (Mills et al., 2014).

Conversely, the Developmental Model of Sports Participation (DMSP) is a framework built on research with elite and recreational athletes in various sports. The framework attempts to address some limitations of deliberate practice (Coutinho et al., 2016). It suggests that children and youth who enter into sports programs eventually choose to participate in sports at a recreational or elite level or drop out of sports completely (Fraser-Thomas & Côté, 2006). DMSP

identifies three distinct stages of development for youth: (1) the sampling years (6-12 years olds); (2) the specializing years (13-15 years olds); and (3) the investment years (16 years olds and onwards). The main advantage of this framework is that there are clear indicators for each stage consistent with child and adolescent development.

The DMSP is based on the type, intensity, and variety of sports experiences athletes have during childhood. There are two pathways toward sport expertise through DMSP: (1) early specialization, which involves high volumes of deliberate practice in one sport from an early age; or (2) early diversification (sampling), which involves participation in a variety of different sports activities and play (Henry & Hodges, 2018). Sampling and deliberate play provide a foundation for sports and physical activity participation. Sampling would typically be followed by entrance into a performance pathway to specialize if it is determined that the athlete should move through to that pathway. Once in a performance pathway, more time is spent at deliberate practice, and there is additional investment in becoming an expert in a single sport. Within DMSP, sampling and deliberate play also provide the building blocks for an alternative pathway to continue participating in sports recreational for physical activity, enjoyment, or health reasons.

2.1.3 Early Sport Specialization

A large body of evidence suggests that highly competitive year-round training is associated with high rates of burnout and overuse injuries in children and youth (e.g., Phillips et al., n.d.; Martindale et al., 2005). Early recruitment and prolonged exposure to talent development programs are highly desirable for coaches and recruiters because it provides a more significant timeframe to develop the skills and expertise necessary for the professional level (Dugdale et al., 2020). An early specialization pathway is typically characterized by child athletes regularly partaking in relatively high-intensity practice and competition in a primary

sport (Lloyd et al., 2015b). They engage in relatively little play activity in their sport or their personal lives. A greater diversity across sports at an earlier age may manifest itself in more flexible perceptual-motor and perceptual-cognitive solutions to a broader range of problems and the attainment of adaptive expertise, important traits of an elite-level sports performer (Ward et al., n.d.).

Encouraged by ultra-competitiveness, professionalized development programs, travel teams, and media and markets directed to young athletes and their parents, youth sport is increasingly characterized by an early, intense, single-sport focus (Bergeron, 2017). Rigorous sport-specific training, year-round, high-frequency competition with insufficient rest and steady recovery time, and other non-specific sports activities crucial for developing youth often reinforce an early specialization pathway (Bergeron, 2017). Parents and coaches feel that if they do not encourage single sport specialization, their youth athletes will fall behind or miss opportunities others receive. Unfortunately, it is too often that adults determine a young athlete's potential, emphasis on a specialized sports "career," and success (or not) well before adolescence, and the adult stakeholders divert the youth's natural enthusiasm (Bergeron, 2017) to a sport causing early dropout. The pressure on young athletes to specialize and excel in their chosen sport as early as possible is difficult to overcome (Till & Baker, 2020).

Regardless, for those working in athlete development environments, there seems to be little evidence of the value of early specialization in LTAD (Till & Baker, 2020). The concerns about early specialization have led many to advocate for early diversification (Baker, 2003; Baker et al., 2009; Côté et al., 2007). Early diversification involves late or delayed specialization, accumulating more significant amounts of practice in the primary sport at or starting around ages 13 to 15 (Côté et al., 2007).

Researchers have identified several negative consequences of engaging in an early specialization pathway. Many have highlighted the prevalence of preventable sport-related injuries and health problems, including overuse injury, overtraining, and burnout (Bergeron, 2017; Di Fiori et al., 2014; Lloyd et al., 2015b). In an examination of overuse injuries and youth, Di Fiori et al. (2014) cited year-round, sport-specific training and competition as contributing factors. The schedules of specialized youth are often the same as adult professional athletes. Short recovery periods make athletes vulnerable to overuse injuries. Di Fiori et al. (2014) also indicated that this vulnerability could be further increased by rapid changes in growth commonly seen during puberty. The risk of injury should underscore to stakeholders the need to focus on progressive LTAD rather than early specialization.

Fitness, athleticism, skill, and physical and psychological resilience must adequately support the expectations and demands of sports training and competition (Bergeron, 2017). Coaches and parents must recognize and respond promptly to the early warning signs indicating athletic overload, overuse, or apparent injury (Bergeron, 2017). They should also remember that too much too early could have negative consequences for children involved in sports (Bergeron, 2017). Malina (2009) also noted that early specialization and focus to manipulate the TD system are often costly for a child's health and long-term achievement potential in sports. He also emphasized that tendencies to select or specialize early caused large numbers of youth to be overlooked or even excluded, especially those whom most need community support to participate (Malina, 2009). This also highlights the social consequences for children and youth who specialize early. Given the time commitment and social isolation a single sports youth athlete faces, the potential for exclusion from peers of similar age and the opposite sex and altered social relationships with peers, parents, and family is potentially higher.

2.1.4 Key Aspects of a Talent Development Environment

Talent development relates to providing players with a suitable learning environment to realize their potential and develop the previously identified talent (Williams & Reilly, 2000; Finnegan, 2020). Despite movements emphasizing the coach's role and the importance of high-quality deliberate practice, the notion of talent is firmly entrenched in athlete development systems (Baker et al., 2018). A thriving talent development environment in sports has been characterized as a program/team/club that continually produces top-level athletes from their junior athletes and provides them with the resources for coping with future transitions in and out of the sport (Alfermann & Stambulova, 2007). Such settings can also be classified as athletic talent development environments (ATDE) or talent development programs (TDP). Côté and Hancock (2016) characterized talent development environment and talent development programs by the long-term goal of achieving elite performance at the cost of short-term gratification and enjoyment. Henrikson, Stambulova, and Rossler (2010) classified a talent development environment as “a dynamic system comprising of athletes' immediate surroundings where athletic and personal development takes place; the interrelations between these surroundings; and the organizational culture of the sports club or team” (p. 160).

An athlete's talent development environment is a primary driver behind achieving elite sporting success (Baker & Horton, 2004). It is doubtful that athletes would be able to achieve high performance levels without a positive talent development environment. Literature that describes high-performing talent development environment programs typically cites four common characteristics: (1) high-quality coaching; (2) large volumes of appropriate training; (3) supportive and competitive peer training groups; and (4) consistent participation high-level competition (Baker & Young, 2014; Henriksen & Stambulova, 2017; Williams et al., 2018).

The organizational culture is an integrative factor of the talent development environment's effectiveness in helping young talented athletes develop into senior elite athletes (Larsen et al., 2014; Alfredmann & Stambulvova, 2007). This was a key component of Henriksen et al. (2010) holistic ecological approach to describing a talent development environment. Eight common characteristics or features of a thriving talent development environment are identified. They were: (1) training groups with supportive relationships; (2) proximal role models; (3) support of sporting goals by the wider talent development environment; (4) support for the development of psychosocial skills; (5) training that allows for diversification; (6) focus on LTAD; (7) solid and coherent organizational culture; and (8) integrations of effort (Henriksen et al., 2010)

From a British perspective, Martindale et al. (2007) characterized a talent development environment with (1) clarity and consistency of philosophy, objectives, and methods; (2) wide-ranging and coherent messages and support; and (4) an emphasis on age-appropriate development rather than age group successes. Larsen et al. (2010) selected one of Denmark's top soccer clubs and affiliates for a case study in talent development environments. Coaches and managers in that club felt that to be considered a talent developer, the geographical position of the club was a high determinant; there was a 'family-like' culture at the club that was associated with traits like openness, cooperation, humbleness, and professionalism; and a strong focus on player education, personal development, and skill development over results.

Nesse et al. (2020) also asked whether non-professional or professional clubs provided the best environment for development. They highlighted the importance of the resources and competence of professional clubs, which suggested that these clubs offered the best environment for development (Nesse et al., 2020). Professional clubs mainly concentrate on players' skills

and manage the players' skill development, producing more talented players. The common belief was that within a professional structure, a more performance-oriented culture was offered (Nesse et al., 2020). The study was also open to the idea that non-professional clubs could offer equally good environments, up to a certain age, based on whether they had quality training sessions with qualified coaches (Nesse et al., 2020).

2.2 Constraints in the TDE: Issues in Identifying and Developing Talent in Youth Sport

It has been established in the literature that talent, talent identification, and talent development are multifaceted, complex, and may be constrained by several issues. These issues may be personalized and unique to the individual or the talent pool. They may also intersect shaping the experiences of individuals and groups. Limiting constraints in a talent development environment and recognizing how constraints impact decisions about talent could greatly improve the number of athletes who continue to be engaged in sport and who receive appropriate training opportunities. The following section of the literature review looks at the research about potential constraints that may occur within Canada Soccer's talent development pathway.

2.2.1 Growth and Maturation

A firm understanding of growth and maturation principles is needed when considering youth athletes' identification, selection, and development (Goncalves et al., 2012). The first two decades of life represent a dynamic stage because of physical growth, biological maturation, and behavioural development (Eisenmann et al., 2020; Bergeron, 2017). Therefore, it would not be appropriate for sports practitioners to consider "children as miniature adults" (Eisenmann et al., 2020, p. #).

Growth and maturation will present many complexities and a degree of risk and uncertainty to any TI and TD processes during adolescent years because of rapid changes in

physiological and anthropometric growth (Williams & Reilly, 2000), as well as changes in psychological and cognitive characteristics (Cummings et al., 2017b). These individual differences can create significant inequity among youth athletes that may impede their development, particularly in those deemed early or late maturing. The identification and talent development policies and processes employed by clubs, organizations, and individual practitioners must not be biased toward the early maturing youth athletes (Williams & Reilly, 2000). It is also crucial for structured talent development environments to have a framework that can distinguish between an athlete's adolescent performance and their potential as adults (Vaeyens et al., 2008; Unnithan et al., 2012). Many characteristics that can differentiate between what would be considered an "elite" and a "sub-elite" athlete may not be visible until late adolescence or early adulthood (Kelly & Williams, 2020).

Physical growth, biological maturation, and behavioural development are interrelated and interacting constructs (Eisenmann et al., 2020). Growth and maturation may refer to the processes toward the adult state (Cummings et al., 2017b) or the qualitative system changes to both structural and functions in the body's progress (Kelly & Williams, 2020). A more specific definition of growth would be an increase in the size of the body and its parts (Eisenmann et al., 2020). Maturation, however, relates biological age to the calendar age. Individuals' maturation can be classified as early, average, or late maturing.

Cummings et al. (2020) broke growth and maturation into status, timing, and tempo variables. Status refers to maturation at the time of observations (e.g., prepubertal, pubertal, and post-pubertal) (Cummings et al., 2017b; Eisenmann et al., 2020). Maturity status and timing are highly heritable characteristics (Figueredo et al., 2019). Timing refers to the age at which a specific maturational effect would occur (Cummings et al., 2017b; Kelly & Williams, 2020), and

tempo refers to the rate at which maturation progresses (Cummings et al., 2017b; Kelly & Williams, 2020). Individual differences were seen in the status and timing of growth results in very dispersed groups of child and adolescent-age group athletes.

As children grow, they become noticeably taller and heavier while increasing lean muscle (Eisenmann et al., 2020). A significant amount of research has established that early-maturing youth can possess greater height, weight, and lean mass (Cummings et al., 2017b; Rebelo et al., 2012); muscular strength and power (Vaeyens et al., 2005; Kelly et al., 2021); speed (Eisenmann et al., 2020; Malina, 2009; Cummings et al., 2017b); and, heart volume, lung function, and aerobic power (Baxter-Jones, 1995) over later-developing counterparts placed in the same age category. Overall, an early-maturing adolescent-aged athlete is provided with many potential advantages in athleticism that are needed to succeed in team sports, including physical contact (Cummings et al., 2017b; Kelly et al., 2021).

Individual differences in the status and timing of growth and maturation can affect the psychosocial development of youth (Cummings et al., 2017b). From this perspective, early maturing youth present a more adaptive motivational profile and higher perceptions of physical self in areas like strength, attractiveness, physical fitness, self-esteem, and competency (Cummings et al., 2017b). Perceptions of self may have both positive and negative effects, however. More self-confidence may decrease the motivation to continuously improve or result in the athlete not recognizing relevant performance areas to improve.

Advanced growth and maturity afford an initial advantage in performance, but it may be disadvantageous in the long term. Studies have indicated that youth coaches often perceive youth as “talent” for their age group when the athlete has physical attributes most appropriate for youth-level success (Malina, 2003; Cummings et al., 2017b). Williams and Reilly (2000)

indicated that focusing exclusively on physical attributes during the talent identification process would prematurely exclude youth who have the potential to excel in the future as adults. They felt it was a significant risk for sports organizations to overinvest in talent identification and development solely based on physical attributes. According to the current performance was more likely based on the athlete's heightened physical advantages over others in the same group.

Youth soccer players with heightened physical attributes often obtain more playing time and gain more opportunities to play important positions in competition (Williams & Reilly, 2000; Melina, 2003). This could explain why early maturing players are more likely to be recruited into and retained within a professional club's academy system resulting in further access to higher qualified specialists and coaches, investments in their development, as well as access to higher standards of competition, training, and challenge (Cummings et al., 2017b; Ashworth & Heyndels, 2007; Saether, 2014). Late-maturing players are more likely to be excluded, overlooked, or denied developmental opportunities, regardless of their technical ability.

It is also important to note why being an early maturing athlete might be disadvantageous. Early maturing youth athletes might experience less challenge. This may not prepare them for future competition against physically matched opponents or when there is no chronological age grouping (Williams & Reilly, 2000). Failing to use and develop technical skills during adolescence may also stunt talent development when maturity differences in size and athleticism are negligible.

A late-maturing youth athlete could compensate for any physical shortcomings in size and strength by focusing more on their technical ability (Williams & Reilly, 2000). An increased emphasis on technical skills may allow these late-maturing athletes to be better performers and more talented as adults (Carling et al., 2009). In such a scenario, a late maturing athlete can

“catch up” in their biological development and could overtake an earlier maturing peer with superior technical (Zuber et al., 2016) and psychological skills (Cummings et al., 2018) when not deselected or lost at earlier stages of talent identification (Carling et al., 2009). This would be consistent with the “underdog hypothesis” discussed by Schorer et al. (2009). It suggests that younger and later maturing athletes must be physically, technically, and psychologically “ahead of the curve” to remain competitive within elite programs (Carling et al., 2009). According to Kelly and Williams (2020), such a situation could be due to resiliency and enhanced motor skills developed from working harder than the competition.

2.2.2 The Relative Age Effect

When considering growth and maturation’s impact on youth, talent identification and development, practitioners must also consider RAE. RAE is characterized by an overrepresentation of athletes born earlier in the selection year (Andrew et al., 2022) due to enhanced maturational factors (Baxter-Jones, 1995). While technically a selection bias, the RAE is strongly connected to growth and maturation considerations in adolescents and youth. Most youth sports organizations group their players by chronological age (e.g., age groupings based on calendar dates that an individual was born) over 12 or 24 months (Adam et al., 2020). The belief in grouping children and adolescents of similar ages is that they will be of similar sizes and abilities, have age-appropriate instruction, and be evenly matched in competition (Malina et al., 2019). While age group categories are positive in intention, the idea has led to unintended consequences (Furley & Memert, 2016; Cobley et al., 2009) in youth sports. For example, coaches who depend on the maturity status of the individual youth athlete for selections risk deselection of potentially talented athletes because there can be significant differences in size, strength, and speed within chronological age bands.

Researchers suggest that chronologically older athletes may be selected for talent development programmes due to acute anthropometrical and physical advantages or physical advantages or perception of increased skill (Andrew et al., 2022). The RAE is based upon the notion that chronological age grouping leads to systematic differences in the talent identification and development of athletes depending on the month of the year in which they were born (Ashworth & Heyndels, 2007). A significant amount of literature has been written about RAE that notes a predominance of youth athletes born early in the selection year compared to those born late in the selection year. Players who are born in the first three months of the selection year are much more likely to be selected to sports teams and reach elite levels of play than those who were born in the last three months of that selection year (Baker et al., 2018; Cummings et al., 2017b; Saether, 2014; Vaeyens et al., 2008; Williams & Reilly, 2020). RAE can also be found in educational settings as well. Finnegan (2020) noted that children born earlier in the year are often perceived as more mature than their younger counterparts. Thus, getting chosen more often to serve in leadership roles or positions of authority (Finnegan, 2020) in their classroom's academic and social structures.

The overrepresentation of relatively older players has been consistently observed in various sports (Cobley et al., 2009; Finnegan, 2020; Kelly et al., 2021). It has also been identified in many different countries like Israel (Lidor et al., 2020), Switzerland (Romann et al., 2018), Belgium (Helsen et al., 2021), Spain (Doncaster et al., 2020), Russia (Bezuglov et al., 2019); and Germany (Auguste & Lames, 2011). Studies focusing specifically on soccer link RAE to player representation, particularly on players born early in the year, being found on representative soccer teams (Baker et al., 2010; Till et al., 2020). A tendency exists within youth soccer to select players for youth teams who are born early in the selection period (Auguste &

Lames, 2011). For example, Towson et al. (2017) reported a strong RAE found in age groups across many English soccer development programs. It has also been shown that the effect of RAE increases in higher performance levels of youth soccer (Johnson et al., 2017; Votteler & Honer, 2017). Votteler and Honer (2017) found that 66% - 69% of youth academy players in German soccer and 72% - 81% of the German youth national team players, were born in the first half of the year. RAE has also been found to occur in the early year's level of soccer. Jackson and Comber (2020) reported an overrepresentation of youth athletes born in the first quarter of the year among Under- 9 players on English academy teams.

Figueredo et al. (2019) also examined RAE effects in youth soccer. Their study included a follow-up on the playing status of the study's participants ten years after the initial study. They found that a significantly higher proportion of male soccer players from the youth to a professional level were born in the first quarter of the selection year. This study also investigated coaches' perceptions of the player's potential for success. They ranked the potential highest for players when they were born in the first quarter of the year and the lowest for players who were born in the fourth quarter of the year (Figueredo et al., 2019).

The RAE has been found across a variety of competitive levels of soccer. This would include participants in FIFA Under-17 World Cup competitions (Williams, 2009); professionals and youth Belgian players (Helsen et al., 1998); senior, semi-professional and amateur players in Belgium (Vaeyens et al., 2005); and, at Under-17 regional camps (Glamser & Vincent, 2004). It has also been suggested that RAE is found more at higher competitive levels of youth soccer (Mukika et al., 2009). It is a critical factor in a player's playing position (Towson et al., 2017).

While the phenomenon has been extensively examined in male soccer players with consistent results, examinations in female soccer have been less consistent (Andrew et al., 2022).

For example, there was no RAE observed for female US Olympic national team players, Division 1 France players, or Swiss national team players (Finnegan et al., 2022). Nevertheless, others reported a significant RAE in female youth international players from Europe and North and Central America and domestic players from Spain (Finnegan et al., 2022). Andrew et al. (2022) examined the prevalence of RAE in international female European soccer players compared to internal male European soccer players. The findings of that study demonstrated that RAE was absent in female soccer players participating in the Union of European Football Associations (UEFA) European tournaments between 2019-2022. One possible explanation for this is that females tend to enter puberty earlier than males so that females may reach their physical peak more quickly, limiting the impact of RAE (Finnegan et al., 2022).

Other studies suggested ways to mitigate the RAE. Romann et al. (2020) identified first-time coach selections as the origin of RAE. Reducing age bands to closer match groups with biological age has been recommended for coaches to make more informed decisions through the talent identification and development process (Vaeyens et al., 2008; Williams & Reilly, 2000; Unnithan et al., 2012). Determining biological maturity through invasive (i.e., x-ray) or non-invasive (i.e., peak height velocity) means would provide coaches and other sports practitioners with an apparent reference of an individual's maturity status compared to chronologically coupled peers (Meylan et al., 2010). It is recognized, however, that creating this would be impractical in most youth sports settings, especially those with financial constraints. This would be something that would be more accessible at a professional club's youth academy as opposed to a publicly run, not-for-profit youth sports club.

To protect young athletes from age-based discrimination and dropout, it is vital to eliminate RAE biases at all stages of talent identification and development (Romann et al.,

2020). Educating coaches, scouts, practitioners, players, and parents on RAE and growth and maturation (Figueredo et al., 2019) is essential. Coach licensing and professional development for youth sport selectors should have these concepts highlighted and emphasized in their programming. Reducing the RAE may lead to fewer athlete dropouts and, thus, a larger, more prominent player pool, which benefits talent identification and development (Helsen et al., 2020). Kelly et al. (2021) also suggested a proficiency level-based competition in youth sports, such as belts used in martial arts. This might be a helpful approach to moderate age-related performance advantages. They also described an exciting strategy by American football to group young players based on age and anthropometric bands. This could benefit collision-natured sports like American football, ice hockey, and rugby.

2.2.3 Selection Biases

Biases from sport practitioners can impact talent identification and talent development on many levels. Biases in sport result from individual preferences resulting in liking or disliking individuals or a team. Selection biases can determine who makes a team or who may avail of talent development opportunities. They can take many forms such as stereotypes, generalizations, or simply a preference for athletes who best represent a team playing or cultural philosophy or the performance indicators preferred by that coach or talent selector. The following section reviews literature examining the various biases that exist in talent identification and talent development.

2.2.3.1 Coaches and scouts' predispositions about talent

Athlete selection decisions reflect a coach's, administrator's, or parent's evaluation of the prospects of their athletes (Baker et al., 2018). The identification and selection of talented athletes historically have been linked to a coach, recruiter, or scout's subjective, preconceived

image or preference of the ideal player (Williams & Reilly, 2000; Christensen, 2009). In most cases, they decide based on their overall impression of the athlete from their perspective (Den Hartigh et al., 2018). Christensen (2009) had coaches who described the TI process as something that originated from intuition or a “gut feeling” but valued soccer skills and personal qualities when making informed decisions. A judgment on an athlete’s ability or readiness to play up a level would often be based on the knowledge and experiences acquired by practitioners and their interaction with many players. If these variables play a role in TI, coaches will likely identify and select athletes very differently based on their beliefs and experiences (Roberts et al., 2020). When used in isolation, a subjective approach can result in repetitive misjudgments in talent identification and development processes (Meylan et al., 2010). It can lack consistency (Williams & Reilly, 2000) in making accurate decisions. This can make the validity of coach/recruiter decisions during talent identification challenging because of the prognostic nature of these decisions and the inherent deselections that occur as part of the talent identification process (Roberts et al., 2020). Without a formal assessment of coach accuracy and reliable measures to evaluate success, talent identification and development methods will always be limited (Till & Baker, 2020) in accuracy. To increase the quality of selections, coaches, scouts, parents, etc., can make their decisions by adding a particular weight to specific athletic skills (Den Hartigh et al., 2018).

If coaches do not agree on the talent level or potential of athletes and the coaches’ eye is subjective and variable (Roberts et al., 2020), at best, players who are advanced in maturation are more likely to be successful and thus perceived by coaches and scouts as more talented (Malina, 2003; Cummings et al., 2017b). Therefore, potentially talented players may be excluded because of misguided decisions or biases by uninformed coaches, recruiters, or scouts. For example,

Roberts et al. (2020) demonstrated these inconsistencies when identifying talent by studying judo. The study determined that judo coaches could not agree on their athletes' rankings, implying that an absence of consensus existed among coaches regarding what athletes should be or should not be considered talented. This study demonstrated that talent identification is not as straightforward and reliable, especially at an elite or high-performance level.

Talent identification and talent development can become challenging for stakeholders and organizations who do not have a clear understanding and philosophy of “what talent is” and how to create a performance model (Till & Baker, 2020) that guides selection. The literature recommends practitioners and organizations apply a holistic, multidisciplinary approach to talent identification and development that considers numerous sport-specific attributes when selecting or identifying youth players (Meylan, 2010). Regardless of the amount of information collected to make a decision, it is still possible for some errors and biases to affect talent identification and talent development. Differences in opinions may lead to less accurate-decision-making and disagreements between talent assessors (Den Hartigh et al., 2018). Since a large part of the pool of youth sports coaches consists of volunteers and executives with varied sports education and expertise, it is easy to see how some potentially talented athletes may be excluded because of selection bias.

Bergkamp et al. (2019) examined variables important to soccer scouts when identifying talented players. Their research analyzed the players' age at which soccer scouts perceived could predict future performance, what attributes the scouts considered necessary for future performance, and to what extent the score and combined assessments on the attributes they described mattered. The average age to predict performance fell within the age interval or cohort they scouted, except for those under 12 and younger groups (Bergkamp et al., 2019). The four

most frequently named indicators to predict performance were the following: (1) technical skills or technique with the ball, (2) game sense and awareness, (3) physiological or motor skills and sprinting speed, and (4) a winning mindset/mentality (Bergkamp et al., 2019). Scouts reported considering attributes in the technical performance category as the most important predictor of future soccer performance.

Saether (2014) also examined Norwegian coaches' selection criteria to identify talented soccer players. The study indicated that while most coaches focus on the player's technical skills, mental skills are also necessary. Most coaches pointed to general skills as opposed to more complicated ones, but many identified a variety of factors that included technique, coordination, and mental and coping skills (Saether, 2014). The coaches interviewed also pointed out that player development depended on the players themselves, indicating that sociological factors were less important (Saether, 2014). Terms like loyalty, focus, and "fitting into the group" attitudes did arise as key psychosocial factors (Saether, 2014). Another paper by Saether (2007) mentioned factors like physical training, physical resources, coordination, mental skills, coping with physical training, speed, desire, player types, the ability to try, understanding, and attitudes as factors coaches looked for in talent identification.

Researchers have found very general characteristics to predict an athlete's future performance in soccer (Saether, 2007). For example, Williams and Reilly (2000) developed a set of predictors to measure a soccer player's success. Their prediction model classified predictors of individual soccer performance into four sport science determinants: (1) physical, (2) sociological (e.g., hours of practice and perceived social support), (3) physiological (e.g., speed, strength, and endurance), and (4) psychological (e.g., self-regulation, motivation, task, and ego orientation) (Williams & Reilly, 2000; Bergkamp et al., 2019). Other predictors derived from this study are

technical skills such as dribbling and passing techniques and self-assessed tactical skills (Bergkamp et al., 2019). They concluded that sport and exercise science had a critical support role in talent identification and development processes, including monitoring and nurturing talented soccer players toward their potential (Williams & Reilly, 2000). Like many other researchers, they felt many interrelated variables affected young soccer players' talent development.

2.2.3.2 Club-related attributions

Certain clubs may have different performance indicators or prerequisites for a preferred style of play. A club could have a general preconception of what they feel is the ideal player for their particular club. Certain clubs identify size, strength, and speed as paramount for their success and may only want to select individuals with similar attributes. Other clubs may adopt a more “creative” style of play with greater emphasis on skill and technique rather than focusing on physical attributes.

Some clubs use acronyms to describe what player attributes they are keen to identify. For example, Ajax FC, a successful club in the Netherlands and globally recognized for their talent identification and talent development perspectives, encourages coaches to use the acronym TIPS (technique, intelligence, personality, and speed) within their talent identification practices (Saether, 2014; in Brown, 2001). Similarly, coaches in England (Saether, 2014; Stratton, Reilly, Williams, & Richardson, 2004) have used other acronyms like TABS (technique, attitude, balance, and speed) and SUPS (speed, understanding, personality, and skill). The positional demands in soccer dictate that fundamental skills are not necessarily critical attributes across all playing positions (Vaeyens et al., 2008). To be considered capable, players must possess a minimum competency level across all fundamental skills (Williams & Reilly, 2000).

Technical skills such as passing, first touch, and dribbling have been found to constitute over half of all the individual actions performed within a game (Larkin & O'Connor, 2017). Therefore, there is great importance placed on players' technical ability and ability to retain the ball (Larkin & O'Connor, 2017). Researchers have found that players who progressed to an elite level of participation were more technically competent in skills such as ball control (i.e., the ability to keep the ball close without using the arms or hands), dribbling speed, and passing accuracy (Meylan, 2020; Larkin & O'Connor, 2017). In addition, they also indicated that skilled youth players posed greater information processing abilities such as decision-making, anticipation, situational probability, and pattern recognition (Larkin & O'Connor, 2017). These skills have been shown to develop using Small-Sided and Conditioned Games as a training method because they create similar versions of full-field games that capture the interactions required for performance (Davids et al., 2013; Bergkamp et al., 2019). Small-sided games are played on reduced pitch areas with fewer players than in an official match (Bergkamp et al., 2019).

2.2.3.3 Anthropometric and physiological

According to Meylan et al. (2010), a talent identification process typically involves physical (anthropometry) and physiological (i.e., performance measures: speed, strength, aerobic and anaerobic power) testing relevant to the demands of the sport. A multidisciplinary holistic approach to talent identification and development addressing technical, sociological, and psychological predictors is generally recommended. However, profiling young athletes according to physical and physiological testing may still provide valuable data for coaches, scouts, and recruiters (Meylan et al., 2010). There has been a tendency for coaches and scouts to either subconsciously or consciously favour anthropometric and physiological characteristics

rather than technical capabilities in young players (Carling et al., 2009). This would result in certain youth players being chosen for their size and fitness rather than their skills.

A bias found in youth sports, particularly in male sports, is to favour taller and stronger athletes, meaning that athletes with greater biological ages are more likely selected for sports teams (Malina, 1994). Meylan et al. (2010) indicated that skilled youth soccer players' anthropometric and physical performance measurements are much heavier, taller, and faster than those of less-skilled players (Meylan et al., 2010).

If the goal of a coach or organization is short-term success at the youth level, then selecting individuals concerning their anthropometric and physiological attributes may translate into significant competitive advantages. The greater size, strength, aerobic power, muscular strength, endurance, and speed in earlier versus later maturing children and adolescents may mask or be mistaken for more extraordinary sport-specific skill (Armstrong, 2017; Cogley et al., 2009). It is possible to speculate that youth players who lack physical superiorities in youth have a reduced ability to influence game situations. These players may be deemed less talented and excluded from the TD process in favour of more physically dominant players who can provide positive competitive results. A preference for these indicators may also open the doors of academies and centers of excellence to promoting better training conditions for the athletes and better coaching for their selected players (Gonclaves et al., 2012) despite the lack of evidence that proves that these characteristics translate into better performance in adulthood.

Williams and Reilly (2000) identified that physiological measures are used as key predictors of performance. They stated that clubs playing in top leagues used measures like maximum oxygen uptake (VO₂ max), anaerobic power, grip, trunk strength, and heart volume to select 15 – 17-year-olds (Williams & Reilly, 2000). High-performance soccer players also

showed better results in short and longer shuttle runs. With modern soccer games now being played at such a high tempo/speed, repetitive work rates during games are probably crucial in the context of fitness for soccer (Williams & Reilly, 2000) and in predicting performance levels. Elite soccer players typically demonstrate a higher recovery rate after short bouts of sprinting compared with less skilled individuals (Davids et al., 2013). Established methods like the Yo-Yo Intermittent Recovery Test, Vertical Jump, and Functional Movement Screen (Dugdale et al., 2020) are often used for fitness testing.

2.2.4 Competition for Talent between Sports and Clubs

The current trend of ultra-competitive, expensive youth sports programs supports the selection of early-maturing children and youth and the win-at-all-cost nature of youth sports practitioners (Bergeron, 2017). As stated previously, advanced maturity provides an advantage in performance and selection within chronological age groups. Often the competitive and selective nature of academy/elite soccer can encourage early maturing players to play to their strengths (i.e., size, strength, and power) at the expense of their technical development and tactical understanding of the game (Cummings et al., 2017; Malina et al., 2015).

A further factor that may compromise the talent identification and talent development processes is the protectionist and isolationist type approach of some youth sports organizations. It has been common for youth sports organizations to demand that youth specialize in one sport early in the talent development process (Baker et al, 2018). The main motive behind this is to have athletes devote more time to training and skill development from early competition or participating with athletes perceived to be more talented. It also could be due to the increased commercialization of youth sports (Baker et al., 2018).

In some talent development environments, sports can compete against each other for the same pool of players to identify and develop athletes (Baker et al., 2018). Regardless of the participant, pool size available to a sport system, talent identification, and talent development may be constrained by organizational /sports competition and intra-organizational/sports competition (Baker et al., 2018). A popular sport may benefit from a large participant pool. However, talent development programs still compete against each other for the commitment of the same players who could give them an edge in winning. In many incidences, a sports organization can extensively scout youth and adolescent athletes to try to secure an athlete's commitment to their team (Baker et al., 2018). For some, it is more important to create a circumstance where short-term priorities supersede the long-term development of the athletes (Baker et al., 2018). Talent development organizations in some popular sports can make decisions that compromise the best interests of individual athletes because they know that there is a sizeable recurring participant population to draw from in the future.

More inter-sport competition exists where sports must generate successful athletes from smaller pools of available participants. With a limited population of prospective athletes to draw from, these circumstances may promote early specialization and isolationist practices. In this context, organizations may also continue to invest in athletes when there are indications of a low likelihood of reaching the highest levels of achievement. Players and entire club teams migrating from “periphery” teams and leagues often result in a deskilling of leagues (Finnegan, 2020), reducing the competition level of leagues. Play movement or migration amongst youth clubs may also be directed by standards of coaching, playing facilities, and available competition in other areas (Finnegan, 2020). The lure of increased exposure to talent scouts and recruiters and

enhanced playing opportunities can also lead to the movement of players to different leagues (Finnegan, 2020), thus degrading the development opportunities for other players.

Talent transfer programs aim to identify and move high-performance athletes with more significant potential for success in another sport (Baker et al., 2018). According to Baker et al., (2018), these types of programs seek to exploit two factors. First, not all athletes within a developmental system will go on to achieve the highest levels within their sport. Second, some athletes have talent in a domain that can be readily transferred to other sports. Here, the key is that athletes, likely already high-level performers, move from one sport to another. As long as a task, environment, and individual constraints align in a way that makes the transfer feasible, such programs are thought to increase the productivity of overall athlete development (Baker et al., 2018).

2.2.5 Sports May Change

An important consideration made by Till and Baker (2020) was that a sport's playing philosophy, accepted rules and strategies, or the ideal player profile for that sport could change over time. While current coaches, recruiters, and scouts determine which athletes have the most potential or what skills will be necessary for elite performance, what constitutes elite performance might look different as time progresses, and a particular sport evolves. Talent identification and development programs must predict how sports will change to anticipate the skills and capabilities needed to be successful performers (Till & Baker, 2020).

Sports may also develop naturally. For example, there are technical changes, rule changes, and equipment changes. New solutions to performance problems emerge as talented individuals learn how to assemble creative movement solutions during practice (Phillips et al., 2012). Equipment changes have created shifts in performance (e.g., change from wooden to

metal baseball bats), changes to playing surfaces (i.e., the international ice hockey surface size vs. National Hockey League size or artificial turf instead of grass), and rule changes (i.e., the three-point line in the Olympics vs. the National Basketball League) (Phillips et al., 2012).

Basically, players must constantly re-invent themselves or demonstrate an ability to adapt to the strategies developed by opponents (Phillips et al., 2012).

2.2.6 Birthplace Effects

Where an athlete resides has a significant impact on their progression. Population size, density, and proximity are all environmental factors influencing a sport system, affecting talent identification and talent development factors such as sports access and coaching (Rossing et al., 2018). An athlete's place of birth has been shown to influence their early development. Some types of communities have also been more able to produce more elite athletes than others. However, there does not appear to be an optimal community population size or density for developing talented athletes. Côté et al. (2006) referred to the 'birthplace effect,' where the quality and quantity of play and practice interactions afforded by the physical environment of smaller cities are favourable for talent development (Phillips et al., n.d.). Rossing et al. (2018) described how the birthplace effect accurately highlighted the critical role of the location where children spend their developmental years on talent development in sports. Athletes from large urban centers are likelier to practice their sport in a structured setting such as a league, which is monitored by coaches with specific practice times and games (Fraser-Thomas & Côté, 2006). Smaller centers are more likely to avail of deliberate play (Fraser-Thomas & Côté, 2006).

The birthplace effect has been noted in many countries (Baker et al., 2009; Bruner et al., 2011; Tunnidge et al., 2014; Lidor et al., 2014). Place of birth can affect the distribution of players and clubs, availability of facilities, and league competitions (Finnegan, 2020), amongst

other processes. Studies on community size have shown that relatively smaller cities or communities (i.e., populations between 1,000 and 500,000 inhabitants) have produced more elite athletes than those with less than 1,000 or more than 500,000 inhabitants (Rossing et al., 2018). Côté et al. (2006) suggested that smaller cities (i.e., those with populations less than 1,000,000 inhabitants) provide opportunity advantages for talent development because the populace is large enough to support the need for facilities, different sporting clubs, club networks, and competition structures (Phillips et al., n.d.).

A Canadian study of female soccer players described medium size communities (i.e., 10,000 - 249,000 inhabitants) as providing the best odds of participation and continued engagement in soccer (Smith & Weir, 2020). Studies from Israel (Rossing et al., 2018; Lidor et al., 2014) and several European countries (Rossing et al., 2018) have shown inconsistencies in the optimal community size for athlete development (Rossing et al., 2018). Therefore, an ideal community size optimal for talent development cannot be established or generalized to countries of different sizes or a particular culture.

One reason why there could be conflicting results is that there is a significantly higher population density found in Europe compared to North America (Rossing et al., 2018). There is a shorter distance between cities in smaller European countries when compared to major cities in North America. In addition, there are likely differences in athlete performance levels and cultures of sports between municipalities, countries, or geographical regions. Baker et al. (2009) proposed that community density more accurately represented sport participation than community size. These characteristics likely have an impact on the opportunities available to athletes.

In talent development, community density has been examined in several regionalized contexts. A Danish study found that communities with high density had proportionally more elite soccer athletes, while mid-density communities had a higher proportion of elite handball athletes. Urban communities with a population size greater than 30,000 inhabitants and a density greater than 250 pop/km² had developed proportionally more youth elite league football athletes. In comparison, there was an underrepresentation of youth elite league players from most rural communities with a population size of fewer than 30,000 inhabitants and a density of less than 100pop/km². Urban communities with a population size lesser than 50,000 inhabitants and a density greater than 1000 pop/km² have proportionally more national team youth football athletes, while rural communities with a population size less than 10,000 inhabitants and a density less than 100 pop/km² have proportionally fewer. Rural youth athletes were underrepresented at the elite youth league level and even more at the national youth level. In contrast, urban youth athletes are overrepresented at the elite youth league level, especially at the national youth level (Rosling et al., 2018).

Studies on physical activity participation show that proximity to open play spaces and recreational facilities is a crucial determinant of physical activity and sport participation (Wicker et al., 2012). An athlete's proximity to talent clubs or elite centers in their early years is also fundamental to athlete development. Finnegan et al. (2016) concluded that Irish youth soccer athletes developed in counties with a national center of excellence were 50% more likely to be selected for elite programs than those developed in counties without a center.

One argument supporting the theory that the proximity to high-performance clubs influences talent development is that athletes are more likely to inherit a sense of community sports pride for that sports club the closer they live to the club. Athletes far away from a talent

club may face many challenges effecting their participation and performance. For example, long distances require additional support for transportation to and from where the club is located. When athletes reach the age of specialization, they will often be required to leave their local club in favour of a high-performance club where they can access better coaching and resources. So, proximity to key resources found at a high-performance club or talent center should be considered necessary in terms of talent identification and talent development.

2.2.7 Other Determinants of Sports Participation and Sport Performance

It is shown in the literature that talent, talent identification, and talent development are multifaceted complex processes without a clearly defined framework. Similarly, a person's access to sport and sport systems needed to reach the highest levels of sport or just to live a healthy active lifestyle is dependent on of several factors that sometimes can be controlled or are uncontrollable and may intersect with each other. This section of the literature review looks at research that explains some determinants of sport participation and participation in sport performance systems.

2.2.7.1 Nationality and ethnicity

A person's nationality and ethnicity can significantly affect sports participation, talent identification, and development processes. Ethnic minority children are likelier not to participate in sports (Wejtzes et al., 2014). People with white ethnic backgrounds are more likely to participate in sports. Similarly, people without a migration background tend to participate in sports more often than those with a migration background (Breuer et al., 2011). One reason is that migrating people experience cultural barriers (Hallmann & Breuer, 2014). Social class also has a significant effect on participation. Children from single-parent families and ethnic minority groups are especially disadvantaged (Williams & Reilly, 2000).

Sports participation can differ by race (Berger et al., 2008). Sport historically has been positioned as an opportunity for white middle-class adolescents and a solution to crime and poverty for racialized and marginalized adolescents (Berger et al., 2008). The growing ethnic diversity of Canada's population, particularly in urban centers, calls for examining the possibility of race or ethnic-based differences in participation levels (Berger et al., 2008). The General Social Survey- Canadians at Work and Home, reports that only 27% of Canadians aged 15+ regularly participate in sport (Statistics Canada, 2016). Male immigrants were most likely to participate (72%) but women are much less likely to participate in sport, with only 28% of immigrant women regularly involved in sport.

A person's nationality can restrict the social valuation of sports (Hallman & Breuer, 2014). For example, immigrants are less likely to participate in organized sports and join sports clubs in Germany according to Breuer and colleagues (2011). Thus, sports clubs and organizations should make communication in different languages an option to reduce misunderstandings and encourage participation. Rules for sports like soccer are the same in all countries, so language should no longer be an obstacle to sports participation (Breuer et al., 2011) for newcomers. Awareness of cultural differences amongst athletes, members, coaches, and staff would also make the environment more accepting and inclusive to new members with an immigration background.

2.2.7.2 Gender

Gender seems to be a significant variable affecting sports participation and talent development inequities. Most studies indicate that men are significantly more active than women (Downward, 2007; Humphreys & Ruseski, 2006; Breuer & Wicker, 2008; Berger et al., 2008). One possible reason for this may be an inadequate sports infrastructure that discourages women

from participating in high-level competitive sports. Like men, women are more likely to be active if suitable sports programs are specifically for women. Women of some ethnic minorities might be discouraged from participating in sports for cultural or religious reasons.

Women's sports have been steadily increasing with the establishment of professional leagues and talent development/academy structures for young female athletes' development (Curran et al., 2019). One issue still exists are that programs designed for female athletes are copied from male perspectives without considering the gender differences between males and females. Gender differences play a central role in the development of young athletes, as there are notable differences between males and females in the physical and cognitive contexts (Curran et al., 2019). For example, young females' aerobic fitness evolution progresses slower than males (Fornasiero et al., 2018). In addition, female youth athletes prefer a more task-oriented climate (Murcia et al., 2008) and have a more long-term focus than males. Relative age effects are also less pronounced in female sports, potentially due to maturation differences between females and males (Romann et al., 2018). Biological factors (e.g., puberty, pregnancy, menstruation, hip structure) are unique to female athletes that would affect women differently than males during sports participation.

The Rally Report: Encouraging Action to Improve Sport for Women and Girls (2020) identifies gender inequities in Canadian sport. It identified that sport participation rates by gender in Canada are not improving. The report identified several actionable items to improve participation rates and retention of girls and women in sport including low participation, many barriers juxtaposed with many benefits, inequities in experiences based on intersecting identities, poor representation of women in leadership, and media influences that perpetuates inequity. It is

crucial that these components are targeted in both research and practice to improve the direction of women and girl's sport experiences and improve athlete retention.

It also could be problematic when women are underrepresented in the data supporting talent development decisions. Curran et al. (2019) investigated the representation of women and girls in talent development literature and found a significant need for more data about females. If research data were to be used to drive decisions about talent identification and talent development, resource allocations, pathway structures, coaching, and competition in female sports would need to reflect the needs of the specific population. Failing to account for the experiences of females in sports can result in inefficient talent systems and less than optimal experience for female athletes (Curran et al., 2019).

2.2.7.3 Beliefs, attitudes, and motivations

In sports, a performer must adapt to the constraints of dynamic performance environments, with commensurate variable conditions and situations, while performing under different emotional states that constrain their cognitions, perceptions, and actions (Headrick et al., 2014). An athlete's attitude about talent also affects motivation, behaviour, and performance. A growth mindset suggests that people generally have the inherent ability, believe in acquirable skills, and develop beliefs about their capabilities (Dweck, 1999). These views can determine whether a person trusts their performance, has behaviours that reflect innate and unchangeable qualities, or is the product of changeable experiences (Baker et al., 2018). An athlete viewing talent as a gift can be problematic for talent development and can significantly influence a coach's and athlete's behaviour. A growth mindset ignores that talent is a fixed capacity that can be identified early and remains stable over time (Baker et al., 2018).

The beliefs of someone like a coach can influence athletes once they have been selected for a team (Baker et al., 2018). Coaches' behaviours can positively and negatively affect players' development (Fraser-Thomas & Côté, 2006). Learners, who believe abilities are innate, can lack effort and persistence and have increased negative emotions (Baker et al., 2018). Such beliefs may also increase the risk of learned helplessness or forms of complacency (Baker et al., 2018). This would be when athletes believe that simply having talent assures them of future success. These types of beliefs subsequently decrease their effort and motivation to improve. Alternatively, those who believe talent to be developable are more likely to respond to a poor performance with an increased effort level and a display of qualities of persistence (Baker et al., 2018). Over persistence, however, may also be a form of helpless behaviour. Believing that talent can be developed with enough effort or practice could be unhealthy or unrealistic and potentially damage the athlete (Baker et al., 2018).

Incorrectly labelling youth athletes as talented, elite, or high-performance can create expectations that they will be successful at later stages in the talent development pathway because they can feel either their talent is natural or gain a false understanding of what it takes to perform at another level (Baker & Young, 2014). Hard work and high-quality training are essential to becoming a high-performance athlete. However, creating unrealistic expectations can damage young athletes, given the low correlation between success at one level of sport and success at the next higher level of competition (Baker & Young, 2014). Similarly, creating the expectation that increased effort and persistence will result in success may also place unfair expectations on athletes with little chance of reaching high levels of their sport (Baker & Young, 2014).

A lack of enjoyment is the most cited reason for dropout in youth sports (Gardner et al., 2017) and continued participation in physical activity (Ramer et al., 2021). An athlete who believes their ability increases through effort experiences greater enjoyment and expresses more intention to continue (Gardner et al., 2017). In contrast, athletes who think their ability is fixed experience relatively less enjoyment and intention to continue (Gardner et al., 2017). Enjoyment refers to positive feelings such as fun and pleasurable experiences. Negative experiences are usually linked with the quality and behaviour of adult supervision or coaches in the sport and the sport system (i.e., poor teaching, favouritism, lack of playing time, scheduling, etc.) (Malina, 2009). The potential negative impacts of elite sport participation have been identified as exclusion, external pressures, and barriers to participation. Many of these can lead to athletes dropping out. Although millions of youth athletes enthusiastically participate in sports, about one-third of them will drop out each year, and well over half of those who quit will do so by the age of 12 (Wending et al., 2018)

Age-appropriate and properly administered sports programs have overwhelmingly strong evidence supporting an athlete's psychosocial development and life-long participation. Improving sports skills is also a significant motivator for children and adolescents to participate in sports (Malina, 2009). The learning environment created within a sports program is likely the most important. The characteristics of coaches and their coaching styles, the instructional and practice protocols, the quality of feedback, parental involvement (positive and negative), and the overall atmosphere of the setting are some important variables that can affect the learning environment. An element of properly administered youth sports programs should include the practitioner's capacity to predict intentions to quit to identify athletes needing intervention (Wending et al., 2018). Supporting youth participation extends beyond creating a favourable

environment and includes monitoring and assessing individual needs (Wendling et al., 2018). A high-pressure environment, typical to modern-day youth sports settings, can increase dropout rates and decrease youth well-being, especially if the child is not psychosocially ready for such an environment. The cessation of participation and poor learning environments are often linked to coaches and the quality of the sport system – poor teaching, favouritism, lack of playing time, scheduling and so on (Melina, 2009). Coaches who are supportive and who emphasize learning, improvement, and a growth mindset facilitate positive psychosocial outcomes. Understanding what motivates athletes can help organizations retain more of them and why they drop out of their sport before reaching their potential.

2.2.7.4 Socio-economic status

Access to financial resources and socio-economic status (SES) can limit or influence an individual's likelihood of becoming a high-performance athlete (Baker et al., 2018). It is well-documented that participation in physical activity and sports rises with income (Humphreys & Ruseski, 2009; Berger et al., 2008; Breuer et al., 2011). A higher income allows individuals to afford registration, equipment, and other goods and services needed to participate in these activities (Wicker et al., 2009; Breuer et al., 2011). Within youth sports, higher income permits participating in travel teams, personal skills training, or purchasing new equipment. The level of parental education and the opportunity cost of time are also strong indicators of sports participation (Breuer et al., 2011). Money and time influence people's opportunities for sports activity (Humphreys & Ruseski, 2019) and their children's opportunities to play.

Time constraints can take the form of caring for children and relatives (Berger et al., 2008). The more time needed for raising children and caring for relatives hurts sport participation (Berger et al., 2009). Childcare represents a vital time constraint for relatively

young adults, while caring for relatives represents a significant time constraint for older adults (Berger et al., 2008; Wicker et al., 2009).

2.2.7.5 Relationships

Developing talent requires consideration of social networks that can enable or prevent progression (Taylor et al., 2021). Although intrinsic and extrinsic motivations are important elements affecting youth sports participation, interpersonal relationships were critical to Wendling et al. (2018). Since sport dropout is most likely to occur during early adolescence, and an adolescent athlete's perceptions of ability could primarily be based on peer and coach evaluations, teammates and coaches must value each athlete's contribution to the team.

There is a significant amount of research identifying the key role that coaches have in supporting talent development in youth sport and soccer specifically (i.e., Wolfeden and Holt, 2005; Henriksen et al., 2010; Smith & Cushion, 2006; Cushion et al., 2012; Larsen et al., 2013; O'Connor et al., 2018). Coaches have significant influence and control over player development and the sociocultural dynamics of the learning environment (Cushion, 2012). Coaches' actions impact players' behaviour, cognition, and affective responses. Crucially, coaches are often the individual responsible for identifying talent, although their experience influences their role in the talent identification process in a specific coaching culture (Sweeney et al., 2022)

A coach's effectiveness is often based on winning percentages, but effective coaching and a positive coach-athlete relationship help an athlete improve self-esteem, efficacy, motivation, performance anxiety, etc. (Gearity & Murray, 2010). In soccer and many other sports, there remains an underlying authoritarian character in the sport's sub-culture, which has a pervasive and influential effect on coaching and coach behaviour (Cushion et al., 2012). It is well documented that ego-driven fear-based coaching is counterproductive to talent development and

athlete success (Gearity & Murray, 2010). Authoritarian and autocratic coaches significantly contribute to sports experiences because they decrease athletes' intrinsic motivation (Gearity & Murray, 2010), resulting in players quitting their sport well before they reach their potential.

Jowett and Hampson (2014) determined that transformational leadership qualities (i.e., leaders' behaviours that promote follower goals and enhance their confidence to increase their expectations) are positively related to collective efficacy. It was found that building quality relationships between coach and athlete added to the collective efficacy of teams and increased athlete motivation to get better and perform. By looking at British soccer players, the findings highlighted that coaching behaviour related to social support and taking more of an interpersonal and relationship approach to coaching the athletes could promote individual belief and team cohesion.

Democratic behaviours, social support, and positive, constructive feedback create valuable relationships between coaches and athletes when the goal is to create better team cohesion and group effectiveness (Jowett & Hampson, 2014). Concerns exist about the effectiveness of a blanket 'positive and instructional' approach to coaching. If misused, adverse affective outcomes can occur from the overuse of praise and instruction, which, if misperceived, can lower motivation (Cushion et al., 2012). The skill or craft of coaching in applying appropriate behaviours to specific contexts and circumstances is likely hugely influential (Cushion et al., 2012).

Kim et al. (2018) described this coaching style as servant leadership. Leadership qualities like empathy, awareness, persuasion, community building, and commitment to the growth of people helped others achieve outstanding performance and productivity. Kim emphasizes the leader as a supporter who hopes to advance the achievement of members' goals rather than their

own (Kim et al., 2018). Promoting ethical behaviours is crucial in building an athlete's ethical conduct and promoting sportsmanship in games.

2.2.7.6 Family Support

Family plays a substantive role in adolescents sport participation (Berger et al., 2008). Parental influence extends beyond simply modelling behaviours to include the enjoyment of physical activity, support for physical activity, reducing barriers to participation, and providing resources (Berger et al., 2008). Family supports are a key environmental factor in “nurturing” talent (Williams & Reilly, 2000). An important determinant of success in any sport, mainly soccer, is the socialization into the club's culture (Williams & Reilly, 2000), such that there is a family atmosphere around the club.

Parents' roles in the talent development process have been highlighted regularly within research. Parents adopt a leadership role during their child's sampling years of development, shifting from a follower/supporter role (Sweeney et al., 2022). Parents also provide emotional support as their child experience the stress and challenges associated with the sport (Côté, 1999; Sweeney et al., 2022). Parental support and a positive attitude to the child's involvement in sports are critical during the entire period of growth (Williams & Reilly, 2000). Parent support is a behaviour (e.g., Economic investment, the provision of information, transportation) aimed at facilitating a child's participation in sports and has been linked to outcomes such as child enjoyment, self-worth, and autonomy (Dorsch et al., 2017). Parent pressure is a directive and controlling behaviour designed to prompt athlete responses to outcomes that are important to the parent (Dorsch et al., 2017; O'Rourke et al., 2011) and has been linked to poor outcomes in child athletes' performance, child discontent with sports performance, and performance anxiety (Dorsch et al., 2017). Adolescents are more likely to engage in and remain involved in sports

activities when they have parents who are socially engaged with them and who remain optimistic about their child's experiences (Humphreys & Ruseski, 2006).

The role of siblings across sport participation has suggested that siblings can have a meaningful influence on an athlete positively and negatively (Taylor et al., 2021). Positive role-modelling behaviours between siblings, like influencing elite-level athletes' decision to specialize in a sport, were reported by Côté (1999). Those dropping out highlighted high levels of competition, rivalry, and jealousy, while those that maintained engagement experienced generally positive role modelling from their siblings (Fraser-Thomas et al., 2008). Taylor et al. (2017) tracked athletes across timeframes and highlighted the perceived importance and holistic role sibling play during development stages.

2.3 Summary of Literature Review

Several common trends appear throughout the literature. The most prominent is that predicting the future sports performance of children and youth is inherently multifaceted, complex, and challenging, even for the most experienced and knowledgeable sports practitioners. The most profound issue is that there is no clear consensus on what constitutes a "talented" or "elite" level athlete. Traditionally, talent identification methods of coaches and recruiters are subjective. So, practitioners should not focus intently on identifying and selecting talent if we do not know what talent looks like and no reliable tests or predictors are available to determine athletic potential (Baker et al., 2018; Larkin & Reeves, 2018).

Notably, a child or youth's athlete development trajectory is rarely linear. This is due to the unpredictable nature of how cognitive, psychosocial, and motor skills development interacts with the athlete's talent development environment. It is also a result of the dynamic nature of growth and maturation in children and adolescents. Talent development models that lack

resources are likely to exclude late-maturing athletes (Vaeyens et al., 2012). The research also shows that talent identification and development in youth soccer (and youth sports in general) can be significantly influenced by a selection bias toward early maturing children and adolescents. Early achievers might be ill-prepared to be successfully transferred from youth to senior levels if not appropriately nurtured through the development pathway (Vaeyens et al., 2012). This leads to delaying early deselection and maintaining talent pools of youth players for extended periods.

It is also important to emphasize that talent selection is only one step in an athlete's journey, and the quality of the talent development environments is arguably more critical to long-term success (Baker et al., 2018). Practitioners should be encouraged to consider approaches to talent development that allow athletes to move across system levels more easily (Baker et al., 2018). Modern talent development models have emphasized the need to move away from early specialization and early deselection to focus on larger pools of athletes (Vaeyens et al., 2012). A stage-specific, balanced and stimulating talent development environment that accounts for the varied needs of young developing athletes is ideal. Gifted/talented individuals will only reach their potential when appropriate development opportunities are provided.

The literature also identifies several consistent direct or indirect factors that can enhance or constrain athletic potential. These may include the quality of the sport delivery system; birthplace; socio-economic status; coach-athlete and peer-to-peer relationships; coach effectiveness; personal beliefs and motivations; and gender. These factors can be controllable or uncontrollable by the quality of the talent development environment. Development-focused coaching will likely inhibit short-term performance/success but set up youth athletes for more

long-term success (Vaeyens et al., 2012). Short-term success and results are becoming more important in youth sports. Modern youth sports talent development models are becoming more professionalized, adult-driven, and affected by commercialism and capitalistic motives. The player's needs should remain at the center of the development puzzle.

The review of literature has highlighted the need for more consistency between stakeholders (parents, coaches, and national sports governing bodies) regarding talent identification and development (Baker et al., 2018). Some of this comes from the professionalized adult-driven nature of youth sports. Some of this is also the result of some parents' ego-driven nature toward their child's success. It is critical to emphasize the role of the coach, sports scientist (Baker et al., 2018), educator, and decision-maker throughout the identification and development processes. Developing an efficient and effective talent development system requires everyone to work together with a shared goal and precise objectives (Baker et al., 2018) for every athlete's success and positive experience with the sport.

This thesis will continue to add to the established literature on talent, talent development, and talent identification. More research is required in topic areas around youth sports particularly trends in North America. Also, there is little direct literature that focuses on youth soccer in Canada and North America. This thesis could fill gaps in knowledge about youth soccer delivery systems in Canada and North America.

Chapter 3: Methodology

Qualitative research methods were employed in this study to provide detailed descriptions of complex phenomena, track unique or unexpected events, illuminate the experience and interpretation of events by actors with widely differing stakes and roles, and give voice to those whose views are rarely heard (Patton, 2015; Sofaer, 1999). Investigating the talent identification and talent development processes in Canadian youth soccer fits these criteria, as does viewing it from the perspective of youth coaches.

The researcher views the study from a post-positivist perspective. Generic qualitative research employs a thematic analysis process to address straightforward, clearly defined research questions (Patton, 2015). This methodology is suitable for this study because it allows the researcher to advance by deviating from methodological prescriptions, remaking existing methods, and building new approaches (Kahike, 2014).

3.1 Context and Research Positionality

This study used a qualitative methodology to obtain answers to questions of relevance to coaches involved in the elite talent development pathways of youth soccer in Canada. A qualitative description of the participants' perspectives and experiences in relation to the questions asked in interviews was suitable for identifying current issues related to talent identification and talent development processes used in Canadian youth soccer. The study also identified future research priorities within talent identification and development from a youth sports lens. A review of pertinent literature indicated a need for more research into how sports implement athlete development frameworks. Sports organizations have placed significant importance on talent identification processes and identified the need for more accurate ways to predict the athlete's potential and how to invest resources into youth athlete development.

Talent identification and talent development were investigated by analyzing the perspectives and experiences of a sample of Canadian youth soccer coaches. Youth soccer coaches were selected to be studied because they had the most input on talent identification and development within a youth sports environment. Coach education (i.e., sports coach licensing programs and formal post-secondary education) would significantly impact the participants' knowledge of these areas.

3.2 Methods

Following ethics approval (See Appendix A: Informed Consent Form), suitable coaching candidates for participation were recruited to participate in the study through a snowball sample of coaches who met the study's inclusion criteria (Patton, 2015). All coaches were initially contacted by email detailing the purpose and nature of the study as well as to ascertain whether they met the inclusion criteria. (See Appendix B: Recruitment Script.) The researcher used their connections within various Canadian soccer coaching networks to invite participants from the organizations to consider volunteering to participate in the study. Some participants were also able to connect the researcher with other experienced coaches whose knowledge and understanding of the Canadian soccer system greatly impacted the quality of data collection. The researcher initially sent a recruitment email to potential participants detailing information about the study and providing assurances about the ethical principles of anonymity and confidentiality. Informed consent outlining the participants' voluntary acceptance to participate in the study and confirming their understanding of the purpose of the study was obtained from each participant.

3.2.1 Participants

Participants for this study were carefully selected to ensure as much diversity in perspectives as possible. To make the study relevant, the researcher determined that it was

necessary to include diverse voices. This included coaches from the national youth teams, professional clubs, PSO programs, and community clubs; coaches living in urban and rural settings; coaches of a different gender; and coaches who coach men's and women's soccer.

Sixteen coaches were recruited to purposely represent four different regions in Canada (e.g., Atlantic, Central, Prairie, and Western). The researcher attempted to recruit coaches representing the Yukon, Northwest Territories, and Nunavut but could not get responses from participants who met the inclusion category. The researcher tried to consider gender equity when recruiting participants but could not recruit many women coaches.

The inclusion of participants was based on several criteria:

- (1) A prerequisite that the participants are coaches with at least five years of coaching experience in a player development role (e.g., full-time coach, technical director, player development manager, etc.) at a community club, private academy, professional club, or provincial/Canadian National Team.
- (2) Given the stage-specific nature of the study, coaches were recruited because they were specifically responsible for the day-to-day development of the players who fell within that age band ((e.g., Under 15 - Under 17 age band).
- (3) All participants would be “certified” with a Canada Soccer Advanced Coaching Licence (e.g., National ‘B’; National “A,” Pro-Licence) or equivalence (i.e., UEFA B, UEFA A, UEFA Pro-Licence)¹.

The Canada Soccer 2020 Annual Report indicated that there were 53 A licenses awarded in 2020 in addition to 34 license renewals (Canada Soccer, 2020). There were also 24 B licenses

¹ A coach licence equivalent is a comparable license from another FIFA member association recognized by a member association as meeting the standard level of coaching in that association.

awarded with 49 renewals (Canada Soccer, 2020). In 2021-21 there was an additional 24 Canada Soccer A Diploma and 77 Canada Soccer B Diplomas awarded (Canada Soccer, 2023). There are 2,313 licensed coaches (2,138 men and 175 women) throughout Canada Soccer (Canada Soccer, 2023). “Trained” means a coach has completed the required training (Coaching Association of Canada, n.d.). A “certified” coach would be someone who has completed all evaluation requirements (Coaching Association of Canada, n.d.). Canada Soccer maintains a database of certified coaches in its systems. An accurate representation of how many coaches in Canada are *certified* under the study’s inclusion criteria could be done by contacting the Manager of Coaching Education at Canada Soccer.

To prevent coercion in the research, the researcher allocated sufficient time to explain the study to the participant and to give them adequate time to decide whether they would partake in the study. The consent process included explicit statements that the participants were not obligated to complete the study and could remove themselves from the study at any time without providing a reason for the withdrawal.

Participants’ background information was collected through a demographic survey (see Appendix C). The following points describe the pool of participants that participated in this study (Detailed information is provided in Table 1, Participant Demographic Information):

- Three participants were in Atlantic Canada – one from Newfoundland and Labrador, one from New Brunswick, and one from Nova Scotia); four participants were located in the Central region – two from Quebec and two from Ontario; four participants resided in the Prairie region – two from Saskatchewan and two from Manitoba); and five participants came from the Western region – one from Alberta and four from British Columbia.

- Participants had previous experiences in different parts of Canada. Some noted international experience in countries like South Korea, England, the United States, Brazil, Mexico, Spain, Ireland, and the Netherlands. Some participants were also born outside of Canada.
- Participants came from a variety of community sizes. Seven participants resided in urban areas (i.e., areas with a population of 1.5 million or more), including Calgary, Alberta; Vancouver, British Columbia; Toronto, Ontario; Montreal, Quebec; and Ottawa, Ontario. Two participants resided in Winnipeg, Manitoba, a metropolitan area (an area with a population of 500,000 to 1.5 million). Three participants came from medium-sized urban areas (an area with a population of 200,000 to 500,00); one from St. John's, Newfoundland and Labrador and two from Saskatoon, Saskatchewan. The remaining three participants came from small urban areas (a population between 50,000 and 200,000); one from Comox, British Columbia, one from Sydney, Nova Scotia; and one from Fredericton, New Brunswick.
- Only two participants had less than ten years of experience (one had nine years, and the other had six years of experience). Seven participants had between ten and twenty years of coaching experience. The remaining seven participants had twenty or more years of coaching experience.
- All participants held a minimum coaching credential of a National B Coaching License from Canada Soccer. Five participants held a National A license from Canada Soccer. Two participants had achieved a UEFA A license.
- Three participants were coaching at a youth national team level, four were coaching a Professional club's academy team, and two were coaching in a regional EXCEL

program. One participant operated their own private soccer academy program. Seven participants held a technical director or technical lead position for a community club or a PSO. Participants had experienced coaching at various high-performance levels such as U Sports, Senior Men's and Women's leagues, League-1 Ontario and British Columbia, Pre-MLS academy, and Canada Games teams. Some participants were coach learning facilitators or coach education/development managers.

- Six of the participants primarily coached youth-aged female players and seven of the participants focused on only youth-aged male players. Two participants who were working for PSOs would split their coaching time between male and female groups. One participant who owned and operated a private soccer academy would coach both males and females.

3.2.2 Data Collection

Data collection and data analysis were completed cyclically. Semi-structured interviews were conducted as the data collection method to obtain an in-depth understanding. Participants were asked to participate in a sixty-minute semi-structured interview with the researcher. Open-ended questions were asked about the participant's awareness of talent identification and talent development processes within Canadian youth soccer, their experiences within its talent development environment, and the challenges/solutions they see in improving the development of talented youth soccer players in Canada. Some questions were behaviour and perception based so that the researcher could further understand the participant's beliefs, behaviours, and motivations when evaluating talent and how they utilize the talent development pathway. Participating coaches provided demographic information about their coaching background, location, and prior experience. Participants were asked if they would consent to further elaborate

on their answers through further interviews or e-mail. As preparation for the data collection phase, a pilot interview was conducted to refine techniques associated with qualitative interviewing and to make minor modifications to the narrative of the interview guide.

The interview process took place in a private setting to ensure privacy. This was done at the researcher's residence, alone, or in a private meeting room booked at their workplace. Interviews were conducted by Zoom virtual meetings at the most convenient time for participants. This has been done because of constraints (e.g., COVID-19 protocols and geographical locations) involving face-to-face meetings. The interviews were recorded with the consent of the participant. The researcher followed up interviews with an email conversation when needed for clarification.

Data was stored as computer files to prevent loss or deterioration. In this study, the interviews' audio files were transcribed using Otter.ai. The audio files of interviews were converted to digital files and then transcribed into a text document that can be printed and analyzed (Markula & Silk, 2011). An electronic copy of the audio transcript was provided to participants to validate the data. To ensure anonymity and confidentiality, audio files of the interviews were stored on a private external hard drive and a backup drive that was only accessible to the researcher.

3.2.3 Interview Guide

A semi-structured interview guide was developed to facilitate a comprehensive exploration of the participating coaches' views (see Appendix D). To capture an in-depth, authentic experience, the interview guide consisted of open-ended questions that enabled the coaches to reflect broadly and ensure an accurate understanding of what they were describing. After reiterating anonymity and confidentiality, the interviews commenced with a rapport-

building introductory question to initiate discussion on the topic (e.g., can you tell me a little about your coaching background and experience in soccer?). The researcher then asked questions exploring their perspectives on talent identification and development. Some questions were designed to look closer into inclusion and equity within the youth soccer context. The causal nature of the interviews allowed the researcher to build rapport with the participants and elicit honest, detailed responses.

3.2.4 Data Analysis

To analyze the interview data, the researcher used generic qualitative research employing a thematic analysis process to address the straightforward and clearly defined research questions. A thematic analysis was used to analyze qualitative data by applying a set of texts to the interview transcripts to identify common themes, ideas, and topics (Markula & Silk, 2011). A thematic analysis of the data allowed the researcher to gain new insights and concepts from the interviews.

Since the data being collected was primarily qualitative, the researcher first familiarized himself with it by reading it several times. The researcher read the transcripts for meanings and patterns across the data set. They also looked for patterns and observations in participants' attitudes, opinions, or beliefs about a particular issue or experience. Themes were identified by looking for common responses to the questions asked during the interviews. Concepts obtained through these analyses are then refined into categories. These categories are fully developed with sufficient data saturation (Markula & Silk, 2011). The researcher traced coherent ideas from the data based on these categories and identified the dominant themes.

By revisiting the research objectives, the researcher identified the research questions that could be answered by collecting data and establishing further questions that arise from the data.

The researcher merged similar themes and removed those with insufficient data. The researcher linked the themes to the purpose of the study. Quotes helped back up the points made in the narrative. Finally, the researcher's interpretive analysis was included to make an argument for the claims present (Markula & Silk, 2011).

Guest et al. (2006) note that saturation may be attained by as little as six interviews, depending on the sample size of the population (Fush & Ness, 2015). No one-size-fits-all method exists to reach data saturation because study designs are not universal (Fush & Ness, 2015). Saturation was achieved in this study when there were no new themes emerging in interviews. Data saturation depended on similar themes found in the study and upon the richness of the data obtained. Rich data allowed the researcher to revisit research objectives and questions and establish further questions arising from the research. Rich data is many-layered, intricate, detailed, and nuanced (Fush & Ness, 2015). The depth of the data is likely dependent on the knowledge and experience of the participants. The interview questions were structured to facilitate asking multiple participants the same questions to help achieve data saturation. The researcher constructed a saturation grid, where important topics were listed on the vertical and interviews to be conducted were listed on the horizontal (Fush & Ness, 2015). A diverse group of participants were selected from various regions of Canada who met the inclusion criteria. When the themes emerging from the sixteen interviews were consistent, the researcher realized that the study had reached saturation and closed the recruitment process for additional participants.

3.2.5 Trustworthiness

There are biases due to the nature of qualitative research that could limit the scope of the analysis or create an obstacle in finding a trend or meaningful relationship. As this is a qualitative study, there could be many different answers and experiences for participants.

Coaches were asked to provide their own opinions, perspectives, and ratings. These may show some bias within their context.

The researcher's bias was addressed in several ways. To address analysis bias, the researcher analyzed the interview transcripts and identified commonalities among the responses. The researcher then tried to consider all the possible facts, variables, and ideas that we research. Methods of reflective journaling and taking field notes were also used. Interviews were also completed in a manner which did not steer participants to particular responses or understand the context of the questions in a certain way. A diverse group of participants were selected from various regions of Canada. The researcher tried to sample different groups of coaches who fit the inclusion criteria.

The credibility of the study's findings was also ensured in several ways. Data triangulation was achieved by using interview transcripts, demographic surveys, and content analysis of research and documents. The researcher also collected interview data from different sources to cross-check participants had diverse backgrounds and coaching experiences from a variety of locations across Canada. Respondent validation was also used from a transcript check and to ensure the accuracy and resonance of the perspectives that were shared.

Chapter 4: Results

The following section is a detailed description of the participants' interview responses. It was evident during the data analysis that there were some prominent themes arising from the discussions. Four key themes emerged: 1) coaches' diverse perspectives in talent identification and talent development; 2) barriers and facilitators for talent identification and talent development; 3) equity, diversity, and inclusion in talent identification and talent development; and 4) priority areas for talent identification and development. Sub-themes follow each main theme to provide more context to the findings.

4.1 Coaches' Diverse Perspectives in Talent Identification and Talent Development

4.1.1 Coaches Have Different Perspectives on Talent

Unsurprisingly, the responses had no clear and consistent definition of talent. Participants provided diverse answers when asked to define talent within the context of youth soccer. Many participants felt the talent was inherently difficult to describe at the youth level because it is often associated with early development in children and youth players. One participant, a technical director of a community club in Atlantic Canada, stated that they did not think about talent much in a youth context because of how closely talent is connected to physically developed youth soccer players:

I think little about talent in the youth soccer realm. The players with the most significant impact [at a youth level] are often early developers. [Talented youth soccer players] are mostly the physically developed ones...They are faster, and they are stronger.

Other participants thought defining talent depended on a club's player development philosophy.

For example, a participant said a definition of talent "depends on what you [or your club] are

looking for...I think different programs may define talent slightly differently, just because of what they want in the players they want at their club.”

Some participants thought talent could be defined through a player’s time practicing or training. One participant noted a connection between talent and the amount of deliberate practice that the player undertakes. This participant said that "kids end up being the most talented depending on how many hours they have essentially spent training...in my opinion, talent is the hours that you spend on [developing] it.” Some participants could connect talent to giftedness. “Players that make it to the top.... they have a lot of natural gifts, natural talents, natural abilities.... they are born with it,” said a Technical Director in Atlantic Canada. Others explained talent as “an innate ability that they have developed,” or as a player with “a lot of natural gifts, natural talents, natural abilities they were born with,” or an “innate ability they have developed through experience.”

Many participants connected the term talent to specific soccer-related skills or performance indicators and how the players applied these to actual gameplay. One participant, a head coach for a Canadian Youth National Team, felt strongly that talented players could “execute their skills on demand consistently above their development stage.” While another participant said that they considered a player talented when the player "starts to show that they are ahead of the skill development trends ...for that age group." An experienced youth national team coach emphasized that talent is not only someone who shows technical competencies at an elite level but “can use those competencies to impact the outcomes of games and the performances of the other players surrounding them.” This suggested that a talented player showed attributes that made their team and teammates talented. Specifically, this person said that when considering what talent is, they "really look for a player’s ability to apply their unique skill

sets consistently at an elite level to impact not just the outcome of the game, but also their performance and the performance of those around them.”

In addition to technical competencies, participants referenced character traits like “coachability,” “mindset,” “effort,” “will,” and “desire.” “If you want to be a real talent, you have to have that will and desire, that inclination to continue improving,” said a professional club’s academy coach who referenced desire as a requirement for development. Interestingly, several participants referenced talent as the cognitive skills and decision-making abilities used during a soccer game. An experienced university and youth academy head coach from the Prairie region said:

For me, talent means that [the player] can [cognitively] process more than what others cannot... from a visual standpoint...there is an ability to connect [gameplay] solutions to their techniques.... then having the ability to execute the solutions... that is a lot of visual perception.

Some did connect physical skills like “speed,” “quickness,” and “power” to talent at an older age group, even though participants believed that physical skills did not determine aptitude in younger players.

Many participants expressed that a definition of talent should represent a holistic viewpoint. A four-corner athlete development model was commonly referenced during the interviews by the participants. Some said that they learned about the four-corner model in coaches during licensing programs. A participant described what descriptors represented each of the four corners. “I follow the four corners fairly closely in terms of technical and tactical, and then physical and another social-emotional/psychological in the fourth,” said a provincial

technical director. Another participant, a youth club's technical director from the Prairie region, viewed a talent as someone "with the whole package – not just physically but mentally, socially, technically, and tactically." A provincial Technical Director speaking about the four-corner model said, "I think that talented players certainly exhibit behaviours that demonstrate all four corners that are above their peers and above those at the same [development] stage." The technical director also thought that a talent "impacted the entire sporting experience." A head coach with considerable experience with youth national teams, professional teams, and youth academy programs described talent simply as a soccer player "who represented their country in an international competition."

As a follow-up question, participants were asked their thoughts on the goal of talent identification in a youth soccer environment. Most agreed that talent identification at the youth level was complex and lacked predictive validity. One individual, an 'A' licenced coach from the Atlantic Region stated a simple response: talent identification is to see "who has got the potential to reach the highest possible level of play.... or checks the right boxes that they could progress to higher levels of soccer." A Provincial Team Coach and Technical Advisor from the Central region, thought that talent identification should "identify players that could represent their country since international soccer is considered the highest level of soccer." This same participant noted that the development pathway was a basic piece to talent identification by stating:

We need to support [the players] we identify to keep them on their journey and path.

Talent identification starts with youth in our or provincial programs; they progress to National Development Centers and represent Canada. So, a function of talent identification is to ensure that [the players identified] are supported.

Another youth national team coach reiterated this thought. They believed talent identification was important but stressed that "progressing [the players] on and getting them into environments where they can be challenged" was equally important. Several participants stated that talent identification was needed to place players in the correct learning environments. One explained, "If many children play, you can identify players who will push each other... those with commitment." It would be beneficial for these players to be placed in the same talent environments. A Technical Director in the Prairie region expanded on this idea by saying that "there was merit in having the best players challenge each other at a certain skill level because that is probably going to push them to find different solutions that maybe the [players] below their [development] level are not going to." This same Technical Director also believed that talent identification presents "rewards or sets a precedence that [the player] is on a trajectory of being successful... [talent identification] helps drive players to continue to improve."

Responses were impacted by what level (e.g., high-performance or community club) the participant was currently coaching. Those involved in a high-performance or elite-level environment spoke about "looking for indicators that predicted a player's future pathways." On the other hand, those with a community club perspective mostly centred on responses that aligned with "helping players gain more appropriate experiences and to play more soccer as opposed to looking at it as the ability at a current point in time." For example, a community club's technical director said their club used talent identification to "try and put individuals in the best environment for them to create the best experience and conditions for the kids to learn, improve and enjoy [soccer]."

4.1.2 Coaches Have Different Priorities for Talent Identification

Participants were asked to identify specific performance indicators or benchmarks that they considered when evaluating potentially talented youth soccer players. Responses suggest that various talent indicators determine what youth soccer players are talented and that the indicators and benchmarks differed amongst participants. Many participants referenced the four-corner model when asked this question. The four indicators represent 1) technical, 2) tactical, 3) psychological, and 4) social-emotional. A participant who works as a performance analyst and a player development director emphasized the importance of using this four-corner approach by describing what their organizations require their scouts (or talent selectors) to look for when identifying talented youth-aged players. “The education we give our scouts is to look at maybe one or two specific indicators across each of the four corners,” they said. A community club's technical director reinforced the use of the four corners model when identifying talent by saying that their club “follows the four corners fairly closely...for someone who exhibits talent, or is talented, I think they would be exceptional in all of those areas, or potentially exceptional in three, and maybe doing ok in a fourth.”

The Performance Analyst/Development Director also provided some specific insight into what their scouts searched for across each of the four corners:

On the mental side, we look at resilience, how the player responds to specific situations like adversity, leadership, or communication. On the physical side, we usually look for changes in speed and direction... not necessarily that they are fast, but they can disguise their intentions or change them. On the technical side, we look for consistency and specific behaviours – passing, shooting, dribbling, and creativity. Then tactically, how they execute is based on a broader system, which is less critical the younger you go.

This participant explained that their organization used approximately eighty-two criteria when judging players' talent across the four corners. They said they predominantly look at players who are "competent and proficient across each of the corners of development."

A second approach described by a participant was the three C's (i.e., Confidence, Creativity, and Competency) approach. This person described this approach as being:

A general rule or motto implemented at [our] club is the idea of the three C's. Being confident, creative, and competent encompasses a player's ability to perform at a high level. Bring those three C's alive, and the players will be successful.

Participants mentioned many specific performance indicators. "Technical competency" and "technical skills/abilities" were the most frequently mentioned indicators of talent. These indicators included more particular skills like one-versus-one (i.e., the ability to perform actions to get past an opponent), dribbling (i.e., the ability to control the ball while moving), comfort on the ball (i.e., a general term for being good at dribbling and ball control) and passing and receiving skills. One accomplished Men's U Sport Coach from Atlantic Canada noted that it was necessary to match these technical skills with specific positions when scouting because, "the qualities of a fullback and a center back are very different from that of a holding midfielder or a creative midfielder." A Women's U Sport Coach from the Prairie region furthered this point by sharing their personal recruitment philosophies and how they match specific skill sets to fill out positional needs:

I have ten-character traits that I look for in each position. For me to recruit a player, they need to have seven out of those ten characteristics. Positions require specific physical

pieces based on the demand of that position. [For example] as a midfielder, I do not look at how many sprints [the player] makes in a game because they will not do that often. Instead, I look at how agile they are within five yards.

Many participants felt that physical skills were less critical when evaluating youth soccer players due to children and youth athletes' growth and maturation variability. Some participants noted some physical indicators they looked for when evaluating players for talent. For example, a Professional academy coach and scout for a Canadian MLS team stated that "on the physical side, we usually look for changes of speed and direction...some efficiency in the ability to do that...not necessarily that they have to be fast, but able to disguise or change their intentions." This same participant also added, however, that, "the younger you go down at the youth level, they look at [physicality] less and less." An experienced professional academy youth team coach and talent scout also noted the importance of speed by explaining that they specifically look for, "speed and quickness and at an older age – power," when selecting players for their club's youth teams. This suggests that speed, quickness, and power are important traits of a high-performance soccer player and could indicate a player with potential.

Several participants discussed the importance of cognitive indicators like game management or decision-making skills. One participant, a club technical director, said that within their programming, they "focus all our developmental programming, and coach methodologies on decision-making...we prioritize the decision-making ahead of the technical ability because we believe that smarter players are better players...However, I think the game is becoming more based on cognitive, mental, psychological decision making, and processing speed." A community club Technical Director from Manitoba also referenced cognitive indicators as

technical applications or technical savviness. These were other terms used to describe how the players could correctly apply their technical competencies to various, diverse gameplay situations. Critical thinkers, vision awareness, and problem solvers also appeared within the responses describing cognitive indicators.

Character and leadership qualities appeared consistently as mental performance indicators. An experienced professional coach from Saskatchewan described these as “we look at [the player’s] character as a leader...are you vocal? Are you organizing [tactically on the field]? Are you taking the initiative? How many challenges do you win a game?” A Player Development Manager for a PSO who is also a Canadian MLS team’s Youth Academy Coach emphasized the importance of resilience as a performance indicator and a life skill. “On the mental side, it comes down to resilience...how the player responds to specific situations, like adversity.” A U Sport head coach who is also a Youth Academy Coach described these types of indicators as “culture pieces” or as “whose leading warm-up? Who is communicating what happens after a goal? Who takes the initiative when the ball goes out of bounds?” Participants also used the terms “resilience” or “self-regulation” as indicators to describe mental characteristic common of talented youth soccer players. A Technical Director in British Columbia also said these types of indicators determined “which players are at the field training by themselves or stay after practice for extra touches on the ball or fitness.”

Commitment often appeared as a performance indicator. When discussing commitment's role as an indicator of talent, a Technical Director from Saskatchewan said they had seen instances in their club where they saw a player's commitment level determine how far they went in soccer, regardless of their ability:

[Our club] saw circumstances where we picked not only the fastest and strongest player but the player that was the best problem solver, but at the same time, they are only coming to two-thirds of the events at best. Whereas another player who maybe has not developed yet is keen to improve, and after two or three years, you see a marked difference. Moreover, that player who was much better because they had other priorities or commitments just dropped off.

There was also a clear difference in the indicators used at a club level compared to what was potentially used at the Canadian Youth National Team level. One participant involved in the talent identification process for Canadian Youth National Teams explained that:

Selecting from clubs or provincial programs and selecting from a regional or a national program, the indicators [of talent] are different. [At the national level] the indicators are: which level is the player playing? Is the player playing consistent minutes at a reasonable level? If they play at a certain level, does that mean they are getting out of their comfort zone? You are looking at how a player might respond to a new coach or teammates they have not worked with, where the tactics differ from their club team. They are also out in a new environment, so can they survive this new environment but still do it by demonstrating the right competencies on and off the pitch? That is the difference between a club, where the player is in their comfort zone, and outside the club for a one-time selection process.

Table 2 summarizes all the attributes of a talented youth soccer player as described by the participants. The table also outlines the characteristics of talent summarized by North et al.

(2014), who interviewed 41 of Europe's leading national and club player development experts in Belgium, England, France, Germany, Italy, the Netherlands, and Spain. North et al. (2014) listed player characteristics that would give players a better chance of eventual success. Those attributes provide an excellent comparison to this study's responses.

4.1.3 Coaches Have Different Views about Potential

As a follow-up question to current performance indicators, participants were asked to indicate what key indicators were used to identify a player who could be a high achiever in the future. One interesting point made by a club's technical director highlighted how organizations across the talent development pathway might look at potential differently depending on their context:

When we think of a player's future potential as a community sports club, we do not have a 'first team' as a professional club would. We are not attempting to sell or buy players or build a club based on a player's future potential as much as we must treat everyone fairly, based on where they are at, and then make an assessment on team placements or selections.

In contrast, a youth national team coach said this about identifying potential for high-performance teams:

Your general indicator is the ability to currently perform at a high level in relation to their peers or show some promise to progress into excelling in their sport compared to their peers.

These statements suggest that a community sports club would look at potential from a sports experience lens. While at the same time, a high-performance organization would consider specific indicators when determining who would achieve excellence.

Many participants noted the need for predictive validity when identifying future performance levels in youth-aged athletes, primarily due to the diversity in physical maturation rates. One participant recalled that talent identification at the youth level was “extremely complex” and that the only way to get an idea of what a player might become is to “use as many performance indicators as possible to try and predict future performance down the pathway.”

There was a common belief that age-group sports were dominated by early developers who "received more attention and focus" from coaches than late-developing players. A provincial team coach and technical advisor in the central region stated that physical maturation at a youth level was complex and not gender-specific, making it particularly challenging to make long-term assessments about how talented youth boys soccer players will become:

Girls mature a lot quicker than boys. Many girls are through puberty by the age of 14, so you get an idea of their physical presence in the sport, but many little ‘squirty’ boys do not mature until much later and might be overlooked because of their size.

A technical director echoed this idea that soccer was a late developers sport by stating, “many players in our system do not start to excel in soccer until they are seventeen or eighteen years old and go on to be very successful at a university and higher levels of the sport.”

Some participants felt that some physical characteristics, namely speed, were crucial indicators of potential. A coach from a Regional EXCEL Super Center (REX) program and the

Canadian Youth National Team program felt that speed along with exceptional technical ability were critical determinants of potential:

If someone is fast in any sport, that is a crucial thing...but you would always ask yourself how significant the technical gaps are...speed can be a considerable predictor. However, a coach must still look at someone who is outrageously good, technically, but tiny [in size]so exceptional technique would also be a predictor.

Technical abilities were also broken down into more specific technical skills by participants. For example, there were several instances where participants referenced the term ball mastery (i.e., how a player could retain possession of the ball or manipulate it quickly while under pressure from an opponent) as a means of indicating potential.

However, many of the participant's responses focused on psychological or social-emotional characteristics present in youth soccer players when determining potential. A youth national team coach described the importance of psychological and social-emotional aspects in players and referenced some specific traits they look for in potential youth national team players:

Character and personality are probably one of the bigger ones we look at. Just in terms of being a good person and what are [the players] habits. Habits are hard to monitor, but it takes a little more work. When watching habits, it is: How do they warm up? How do they react when something goes wrong? We see many of those kinds of personality traits throughout our evaluations as an essential piece [when selecting players].

The terms confidence, resiliency, persistence, experiences, and the phrase “dealing with adversity” were other psychological or social-emotional traits that appeared regularly in the

participant's responses when describing predictors of player success. A participant who coached at a professional club's youth academy added that they felt that players who faced adversity and demonstrated a passion for the game were the players who "made it" to the highest levels of the game:

Those players that make the national team were always the best in each age group...you have superstars that rise above everyone else. Most national team profiles would be built on players who worked harder and longer than anyone else in their positions, age group, and community and were persistent in getting through challenges. They did not give up.

A coach from the Prairie region connected positive character traits to the development of technical competencies. Their programs emphasized many technical components but also considered the responsibility the player takes when applying the skill correctly rather than just how successful they are in performing the skill:

I emphasize dribbling and passing in my coaching because you lose many learning opportunities. After all, [the player] can shake off responsibility and give the ball to someone else rather than solving [the game-play problems] themselves.

Participants also mentioned the importance of cognitive qualities such as decision-making. For example, a Technical Director from Quebec said:

For me, [potential] is the decision-making process, how fast they make decisions. I would rather that the player that sees the pass and then [the coach] helps them get to the point where they can execute [the skill]. That is what I prioritize and the way I like to evaluate potential.

A Technical Director from Atlantic Canada described that attitude would be the determining factor when selecting between two players with equal skill:

If one [player] were a little more skilled than the other and the other player had a better attitude. I would take the player with the better attitude because a better work ethic has a greater chance of continuing with the game and working through faults.

Others reinforced the importance of positive attitudes by saying they looked for players who were a “good person” or had “personalities.”

A Youth Academy Coach with the Vancouver Whitecaps also recognized the need for further player education around potential. This participant said that coaches often talk about reaching potential with a player. Still, they only talk about the first step and not how attitude is required through the entire development process:

There are many soccer players in the world; most will never be able to become a professional player. They do not have the physical makeup or coordination. There needs to be a better piece of player education that goes along with it. We often tell players in professional academies that they are privileged because they have a good opportunity, but those opportunities do not last forever.

Table 3 summarizes the attributes of “potential” in Canadian youth soccer players as described by the participants.

4.1.4 Coaches’ Decision-Making is Context Specific

Responses indicated that youth soccer organizations’ talent decisions depended on club size, resources, and organizational philosophies. A high-performance coach from Newfoundland

and Labrador explained that "there is likely a great variety around how [talent decisions] happen, and that is based on the structure of the club." Participants also stressed that decision processes needed to come from a player-centred, holistic approach that "put the needs of youth front and center." Some participants felt this was not the case in all youth soccer contexts and stated that organizational and club-based decisions were still based on politics and personal agendas. One experienced coach from Manitoba described this by saying:

Talent decisions are sometimes made in ways that are not in the best interest of the child... it's more; how can I save my job? If I win trophies, it will be hard to fire me. That is the reality of many clubs.

A High-Performance Coach from Ontario also suggested that there was a "win-at-all-costs" mentality in Canadian youth soccer that influenced how decisions are made:

Unfortunately, in Canada, many clubs want to win at all costs, and that causes harm to the player. It is more important to keep the player at the front of the equations; they must be at the front of everyone's thoughts.

Participants also expressed that the lack of professional, educated coaches throughout the Canadian system made it difficult to make accurate talent decisions. Most coaches were described as volunteer or parent coaches. One participant said:

Most coaches are still parent coaches. At a certain point, even the best clubs in the biggest provinces have parents coaching and contributing as volunteers. There has yet to be a transition, even in the best clubs with all full-time professional coaches. You must have a fair and equitable process for everyone, and I think the parent coaches' selections do not do that.

At the community club level, participants felt it was becoming more challenging to identify the correct players to select for teams based on the organizational structures in place. To help mitigate this problem, clubs and soccer organizations have technical staff intently involved at all points of the selection process. As one participant explained, "Every club, every environment that I have been to, the technical staff has been very hands-on and been to many, if not all, of the selection sessions."

Some participants expressed that selection processes at a youth level needed to be more thorough. A coach from Saskatchewan said that they believed that at the club level, player assessments were not very detailed:

At a youth level, we need to be more detailed in our assessments [of players]. We should not have what we should have to make a much more informed decision on players. I still see player evaluations where kids are evaluated in the spring during a one-and-a-half-hour time slot where sixty kids show up for evaluation.

A youth academy coach and U Sport Coach in the Prairie region expanded on this idea by sharing a perspective that tryouts and trials typically set a player up for failure resulting in high amounts of avoidable deselection:

The kids might have a bad performance on day one or day two. Then they are put in division two or three, where there is little organization and no real development opportunities, and the child does not want to play there. The players will then quit, and the game has lost them altogether.

Another participant, who is a community club Technical Director added this statement about the use of trials at community soccer clubs:

In terms of trials...Sometimes you have not seen the player in months, and you are trying to make an assessment now; the kid could be so nervous, and they could be a great player but did not perform for two days.

It did appear from many of the responses that there was some movement away from trials and tryouts, particularly at the grassroots level, where performance levels are found to be impacted by many factors. One coach from Saskatchewan spoke about how their club and others had moved away from trials and tryout templates:

I have started to see more clubs get away from the one-day or two-day evaluation scheme. Clubs seem to use the indoor season; templates endure over a six-to-twelve-week season and then integrate the players into teams.

Further, some participants mentioned that their clubs had shifted away from a "team-based model" when evaluating players, forming teams, or player placements. A community club technical director explained that their club made this switch:

When [club] teams did their own thing independently, the player's experience depended on the coach the player got. Things went well if [the player] lucked out and got a good coach. If [the player] did not, you missed a year of development. We switched to a club-based model where staff sees each team at minimum once a week at a training session. We can track progress throughout the year and make more accurate assessments of players.

This suggested that participants preferred a more holistic approach to player selections. When referring to a holistic approach, a frequently mentioned term was “layered.” Layered references using multiple processes and evaluators before making decisions. For example, the technical director of a community club said that they would:

Bring players in and go through ten days work of tryouts where the players get a chance to play, and we, as coaches, get an opportunity to work with the players. Then we see who fits where at what level.

Another participant, a Canada Youth National Team Head Coach provided a similar example:

There is now a more holistic approach to checking where [the players] are at....The coaches [in our club] run sessions, then they would have staff watch them in games...That way, by the time the evaluations happened, you had a good understanding of the player's trends and who the key performances were.

This participant also noted how it was a necessary practice to deal with multiple stakeholders during these processes, mainly when the players were at an entry point to a high-performance league:

It would help if you acknowledged the key stakeholders of clubs and different partnerships when making decisions. There are many connotations around performance sports at the age group level. How does it affect school and other sports? What happens with playing time? That is key. When the evaluation process is done, it can be very holistic, involving key stakeholders with the player at the center.

Another participant who is also a coach with the Canada Youth National Teams likewise described a preference to use a holistic approach during trials with a smaller pool of players:

The best approach is to invite players you are considering into a smaller pool. Eight to ten weeks, bring them in, look at them, make sure they are comfortable with their environment, keep looking at them over that period, and then decide one way or another. My preference is to hold specific trials in unique situations.

Another provincial technical director preferred to gather much information on players. They said they believe in “taking in as much information as possible...part will come through recommendations from clubs, another comes from on-location events, where we watch and can interact with the players.” A participant, the Technical Director of a PSO also suggested that there was value to multiple opinions but felt there were occasions where some clubs just looked for a specific type of player to fit their need or their organization’s playing style. They said, “I think that I might have a different opinion than somebody else in terms of what we see in a player, or their value...but sometimes, some programs...some teams specifically will look for a specific type of player.”

Respondents with a background in a high-performance, professional, or large province described a talent identification system with more resources dedicated to making talent decisions. In Ontario, for example, one participant who coached in Ontario Soccer’s provincial team program described an identification process for provincial-level women players where:

National licenses coaches would go to games to identify players...then they scouted a minimum of five rounds depending on whether they have already been in the provincial program. Players are also recommended by a technical director or lead for a club with

supporting evidence why the player should be considered. Those players then come to trials; we have tryouts and selections for the provincial team over two months. They compete against provincial teams from Quebec. From that, we usually make recommendations for the National Training Centers.

They added that the boy's programming had different processes because of the presence of professional clubs and their youth academies, like what is found at Toronto FC:

Many times [boys are] identified through the scouting system for professional clubs like TFC, and they go through there. Typically, the provincial boy's teams are selected from a group that is not yet ready for that academy level but still has potential.

A participant who has been a Technical Director of a community club in several provinces but is currently working in British Columbia noted that in these professional academy environments or a national team environment, there are more resources available to them to make decisions, and that helped with accuracy:

In professional environments and national team environments, you have got just more people discussing different influences with different people, you have got your sports scientist who is talking about height, weight, speed, propensity...if the players get injured, you have got people to assist...these pieces in the identification process are essential for accuracy.

A Director of Development for a large PSO described, in detail, the layers of information and selection criteria they use to evaluate players and how they use their talent selectors/identifiers:

We use ID points from our scouts, and the scouts are trained to provide a score to players across each of the [four] corners of development. The scouts have an opportunity to acknowledge that the player understands how to move their body by splitting the physical corner into physical literacy and fitness and to rank their scores in technical, tactical, and psychological areas. The psychological part is less, but we train the scouts to look for specific incidences. What does the player do? How does the player respond [to different situations]? The other layers have the technical directors of the club's rank players through a scoring matrix that overlays talent and performance. The high-performance players, those that could go to next-level environments like TFC or national team programs, would rank high in seven to nine categories.

This participant also describes indicators and assessments that their scouting staff uses, in addition to subjectively scoring components of the four corners and how all the information is used to create Individual Development Plans for the athlete:

We also have an opposition performer, top performers voting at the end of every match, where the opposition coach ranks the top three players from the opposing team at the end of every game. There are also technical assessments; the last layer is a recommendation process. So, the technical directors are blindly asked to submit. The process is down to eighty-two criteria used to develop Individual Development Plans that are submitted to a central system to which [development staff] have access.

The participant also commented on the use of fitness tests to get a deeper understanding of where each athlete is and not as a performance measure.

Then we have fitness tests that are done twice per year. Still, we only use them for identification as much as to get a deeper understanding of what each athlete is, which adds more value for them directly.

Outside of this participant's response, evaluations appeared subjective and lacked objective monitoring or testing. Physical testing was deemed not very important. For example, the Technical Director of a PSO said:

If someone is not fast enough, in terms of physical speed, that can change over time... physical testing only tells a piece of a player...[only] a bit part of a player. We might use objective testing in a sense, but it is not something we base it on being like the top goals scorer in the league, and we must take them because they scored all the goals. I think we do too much on fitness, like we judge speed, but it must be game speed, like putting two players in a lineup and sprinting against each other does not give you much information.

According to a Technical Director of a Community Club who was also a Master Coach Developer in Atlantic Canada, fitness testing was completed as part of the player's participation and not used as selection criteria. They said, "[fitness testing] is done periodically through the year as part of participation.... Fitness scores or testing is not used as a selection criterion where it does not indicate if a player is capable or not." A Director of Performance and Coach

Developer in Ontario also shared his belief that objective testing was used more at the professional level rather than in the community youth club settings:

There is a mixture of objective and subjective decision-making at the professional level...[software] programs help track player performance like pass completion percentage and other things...but it is not like players are going through beep tests or sprinting tests. [The clubs] feel those structures help make decisions about the current systems.

The Technical Director of a PSO reasoned that objective testing did not show the entire picture of a player:

Much objective monitoring will change over time.... If someone is not fast enough, for example, in terms of physical speed, that can change over time, we as coaches can potentially work with [the player] on that... I believe that tracking goals and assists only tell a part of the player, a bit part of the player. We might use it in a sense, but it's not something we base [selections] on....we always look at the four-corner thinking.

Another participant, coaching at a provincial high-performance level, explained that they also use software to track player performance. They said, "we have software and a video recording system which are used as a reference when they are in discussions with parents and coaches at different points of the playing season." The information helps provide evidence for why certain decisions are made.

When asked about the use of advanced analytics, a participant who has worked as a performance analyst shared that they did not necessarily rely on the analytics to make final

decisions on player selections but claimed that what the analytics did was enhance a coaching staff's game decisions. They explained that “the analytics help us make evidence-informed decisions and provide information that limits risk.... but you have your coaching opinions, the objective side, and other pieces that help make the best decision possible given the information.”

Finally, a participant who had selected players for youth national team programs said that if they were to pick a player, they would consider the following:

For a youth national team, if I pick between player A and player B. Player A plays in an academy or a club and does well. Player B plays professionally in the CPL and gets minutes there. Suppose you ask yourself which player will likely perform at a national team level. In that case, it is probably not an exact science, but the one playing with senior players in a professional environment, training every day, is the one you would pick over a player dominating their age group.

This comment also suggests that the players considered for selection at the national team level came from a very narrow select pool of potential players.

4.1.5 Summary

It was clear from the participants' responses that there were many different perspectives on talent, talent identification, and talent development. The definition of talent differed among participants, but many said that a talented player had the qualities described (e.g., tactical, technical, psychological, and social) to a more holistic, four-corner approach. Coaches also looked for different indicators when identifying talent of potential that was often dependent on the level of play, they were involved with or selecting players for. Determining a talented player or a player with potential as a child or youth-aged player took time due to differences in

maturity. This was more prominent in boys than girls, because it was believed that boys take longer to mature than girls. Coaches felt it was important to keep the talent development pathway open as long as possible so players can work through these maturation differences and continue to play as long as possible. Finally, decisions about talent vary for several reasons including: 1) club/organizational philosophy (e.g., “win-at-all-costs” vs development), 2) Coaching and talent selector experience (e.g., parent coaches vs trained staff, Coach Education), and 3) How the trial, try-out, or evaluation process occurred.

4.2 Barriers to and Facilitators for Talent Identification and Talent Development

4.2.1. Labelling Children and Youth as Talented Can Be Problematic

Participants noted several issues with labelling youth players as talented. Some of the common responses were that labelling “diminished drive and work ethic [in players],” “amplified [players] areas of strength, but diminishes [their] areas of growth,” and “created a sense of entitlement [in the player].” A Club Technical Director and U-Sport coach in Quebec felt that labelling a player could work against the development entire pool or group of players. They said that “[labelling] works against the group because a player could have that sense that they are on a separate level and that they do not belong there because they believe that they are a certain quality of player.”

Labelling talent was seen to be most problematic at the grassroots level of youth soccer. A Regional EXCELL Center Director explained that they believed there were no grassroots players worthy of being called elite or talented.

There is nothing elite about nine-year-old playing soccer. We might label a nine-year-old player as talented, but they may have already reached their potential by twelve or thirteen

years old, whereas others who may be less talented at nine, ten, or eleven may have greater potential.

Others noted that labelling pre-pubescent aged players before their growth spurt as talented was not reliable. For example, a coach from Newfoundland and Labrador said that early selection was unreliable, but it was more important for coaches to get the right players in the right environment:

Early labelling is hazardous because the chances of getting the right [player] are low...At some point, fourteen to sixteen [years of age], you could start labelling [players] because you need to get the players in the correct environments to reach their potential.

A Technical Director in Atlantic Canada noted how the early labelling of talent, the mislabelling of a player as talented, or unrealistic performance expectations could create socio-emotional issues later for the player, possibly leading to them quitting the game:

Promoting talent puts pressure on the children, and we end up seeing them not continue soccer...They often do not have many places to go or do not have that next opportunity. They end up frustrated because they have been told they should be getting somewhere that often is unrealistic for them.

4.2.2 Early Talent Identification Is Not Healthy for Children and Youth Players

Participants suggested that there was a tendency for Canadian youth soccer clubs to start talent selection and identification too early and that it was not healthy for youth players. Most participants indicated talent selection and identification instances starting in the under-nine and

under-ten age groups. However, separating players into teams and talent pools typically began at the under-eleven to under-twelve age categories.

Participants indicated several possible reasons for this trend. A private academy owner said their program started evaluations at under nine to ensure the players were put in the "proper training environment" for their development. A Director of Development for a PSO echoed this desire to place players in the correct training environments by saying that organizations had "a desire [by organizations] to like-minded group players and to try and get them in a best-with-the-best environment as early as possible, thinking that this will improve more players." Some participants identified apparent movement from Canadian clubs to start grassroots level "select teams" or "travel teams" where a club or private academy was selecting those "whom they perceived to be the best players at that time within their organization" to be on a team. A coach in Nova Scotia said these teams or pools were "a defined group working through elite levels and academies and in identification pools for provincial programs." The responses suggested that the early selection teams were commonplace throughout the Canadian youth soccer system and that these early pools of players typically stayed together throughout the development pathway.

Some participants in the central region indicated that their system design had changed to start selections at the Under-13 age group. However, they were looking to move this even higher to a minimum of under fourteen. They said that this was done with the LTAD model and inclusion in mind. A Director of Development in the Central region indicated that "the new Canada Soccer Club licensing program and Children's Coaching License have tried to bring to light that (these processes) should start later." This idea would suggest that Canada Soccer's coaching education programming might impact community-level decisions for club operations and how team selections are being made.

Participants mostly agreed that starting talent selection or identification at an older age was appropriate. The most common response was that it was necessary at the under 15 and 16 levels to have some sort of permanent training environment for players. One technical director said that they keep talent pools open until under seventeen at their club:

We pushed back against early selection to keep our [development] pathways available until our players hit the under-seventeen level...That is the age category where we have our biggest cut-off of players.... We would keep more players in the game, playing the sport, and I do not think it would significantly change the number of players we put on the university or similar-level teams.

Another Technical Director and coach in the Prairies, noted that they preferred talented selection and identification to occur "maybe two years later toward the time a player experiences their first growth spurt or around the point where players are starting to choose the sport that they are focusing on."

Participants felt that early talent selection and identification would result in extreme cases of player dropout. "The sooner we label or hype players as exceptional or talented," said a technical director, "the sooner we push them and others to the door and to drop out." Responses from the participants supporting this reasoning included: 1) a lack of physical and mental maturity in youth-aged players, 2) extreme performance pressures on youth-aged players that leads to mental burnout and then players dropping out, and 3) youth-aged players not being allowed to play or sample other sports, pursuits, or physical activities.

Several participants also mentioned that there was a "definite financial or business incentive" for clubs to start early talent selection pools or talent identification camps. One of

these participants who noted this said that they believed that there was “a perceived pressure for clubs to do [early selections] because it would affect the number of registered players in their system and, in turn, affect the amount of income coming into the club.”

Some participants also expressed a concern about the early introduction of competition, or the application of an adult competition model placed on children and youth-aged sports. A coach and performance analyst said:

There are many issues with [player] retention from competition being introduced too early to youth. Often this happens because adults place adult values on children’s sporting experience....Adults can bring all the negative aspects of competition. When we emphasize standings and winning, we give less playing time because we want to win a championship.

In contrast, a Regional EXCEL Center Director, liked the idea of early talent selection and identification “as long as it was explained to parents and all the stakeholders in a way where it is a long-term journey and pathway for players.” This would suggest that parent education would help mitigate concerns about early competition. “Conflict is derived by the parents and their ego and not by the players...Players just want to play and a lot of the narrative around talent in [youth soccer] is written by parents and their expectations,” explained a provincial coach from the Central region. Parent education about appropriate sport development and quality sport experiences might deescalate conflict because parents and caregivers might have a better understanding of what their child is going through developmentally by participating in competitive youth sports.

4.2.3 Quality Talent Development Environments Are Holistic and Player-Centred

Participants were asked what the components of an ideal talent development environment for a youth soccer player are. The responses were tied to the level of play a participant was actively coaching. At a community club level, there appeared to be a desire to create a meaningful, enjoyable sporting environment that suited the needs of children and youth. One participant, a Technical Director from British Columbia said that “it was important for grassroots clubs to understand their role and how important their role within the talent [development] spectrum...They have a role in passing players into the higher echelons of the game like high-performance leagues and professional academies.” Another participant, a high-performance Coach in Ontario, had the viewpoint that a quality talent development environment for a community club was determined by how much fun the players had:

[A quality talent development environment] meets every player where they are at...It allows players to fall in love with the game and makes sure they make friends... There is lots of laughing and making sure they are always active.

A technical director added an inclusionary perspective by saying a quality talent development environment “is open...[as] it provides opportunities for everyone to be involved... It includes the different needs of the different players.”

Those participants from a high-performance background provided a different set of opinions. They frequently used terms like “standards,” “appropriate training volume,” “training frequency,” “intensity,” and “competition.” A coach from an MLS team’s youth academy acknowledged that a professional academy “does things differently” than a community club. A participant who coached at a professional academy described their approach by saying:

To develop professional players, you must be tough [on them]. You must be demanding because [the players] want to be challenged; they want to improve. They want to be called on to do something with [soccer]; tough love is probably an excellent way to describe the kind of environment you need because you need to [show that you] care for the players. Suppose [the coach] is not interested in [the player]. If [the coach] does not care for [the player], how much energy will [the coach] put into [the player] to improve them as a player and as a person?

While stating that a professional youth academy has increased standards and demands, this participant also recognized that a professional youth academy needed to consider the socio-emotional development of the player:

It is essential for those [coaches] working at the professional level to recognize that they do not only work with talented soccer players or those players with potential. They also work with people; we must make an environment where even if [the players] do not become professionals, and most won't, we still have given them many qualities and experiences that can transfer to other areas in their life. If they are good people, leaders, learners, and communicators and set goals for themselves, they can be successful in all areas of life. Those are important in any environment where your goal is to develop players.

Another participant coaching at a high-performance level said that “like-minded” players create a quality training environment. They said that “the training habits (of the players) must be created by the quality of the coach and the like-mindedness of the other players... A good

training environment is where the intensity is high, and the players understand that in terms of standards.” A Technical Director from Quebec also referred to high standards in quality talent development environments centred around achieving goals and objectives. “I think that setting short, medium and long-term goals that are attainable are effective in these types of environments, but also think that setting objectives [for the players to meet] within a specific timeline, like I wanted to do this by this age, is effective as well.” A coach from Atlantic Canada with experience coaching in England, said that Canada Soccer struggled with standards-based play at the youth level. However, when speaking about standards, this participant claimed that “the standards around [high-performance] environments between [the ages of] thirteen to eighteen is critical...I feel [Canada] gets their age groups incredibly wrong.”

This belief is also connected to the most referenced terms to describe a holistic quality talent development environment and culture. Another coach expanded on the concept of holistic development by saying that they were a big believer in:

The environment is a safe environment for all players to express themselves...In a safe environment, the player feels that they are welcomed and feel like they are being valued... They feel they are being invested as an individual and not necessarily as the whole group...Something we have tried to focus on recently is getting to know each player and understanding what makes them tick and what is going to make them a better person and better player... For me, a quality environment is individualized for every player to succeed.

A Canada Youth National Team Coach believed that a safe environment gave “players much more freedom to make mistakes.... that needs to be a fundamental value in the youth environment...a key component is making sure the players enjoy their soccer.”

Some participants referenced that character development was a vital component of a quality talent environment. One participant said, “[a talent development environment] is not just going to be about talent; it is about building qualities like temperament and resilience. A participant also spoke about the importance of “mentality” when preparing players for elite levels of soccer but still providing opportunities for the players to continue having fun. “When we travel, we travel in a fun way, but we expect the players to act like they are in university... [they stay in their] own rooms with supervision in the rooms next to them, when they eat at a hotel, they are wearing their club gear...they follow the travel itinerary.”

Another fundamental philosophy of a quality talent development environment, according to a Director of Player Development for a PSO, was the coach allowing the players to express their skill and decision-making on the field of play. “Players need to express themselves constantly, and each one is going to bring a unique flair to the game,” said respondent. A Canada Youth National Team Coach echoing this idea said skill expression was “a fundamental value in the youth environment is not to be afraid to make mistakes and then give [the players] the encouragement to feel confident that they are trying well and enjoying their soccer.”

4.2.4 Talent Development Environments Need Competition and Quality Coaching

For one participant, who has been coaching at the Senior and Youth National Team level, the availability of competition was vital to creating a quality training environment. They believed that the players had a better incentive to improve when facing consistent challenges found when

there is quality competition. They provided this insight into how they felt a player could progress by playing. They said that competition was an incentive for the players to improve:

In my province, we used to run a National Training Center where we trained all year, but the players would play games with their clubs, and their clubs played in the same age group. So, [the National Training Center players] would not play in a competition as a group... We would play friendly matches, but they have no incentive for the players.

This participant continued by stating that if a player was dominating an age group, they needed to be challenged at a higher level to improve:

Competing at a higher level is important for players. For a talented player at fifteen [years of age] ...if the coach and club care about the player's needs, they need to play [at least] ten games with the [under] sixteens.... to see how they deal with those tighter spaces and pressure, see if the player thrives...maybe the following year he can play with the semi-pro team and then suddenly they could have a CPL contract because [the program] helped the player go to the next level.

Participants also referenced "quality coaching" and "appropriate leadership" as important components of a quality talent development environment. "A good environment would include certified and experienced coaches at all levels not just the highest level," noted an 'A' Licensed coach in Atlantic Canada. Another participant a provincial coach and technical advisory explained that a quality coach would be "one that cares about the players that they are working with and able to create an environment where the players all feel comfortable." A participant who was an academy coach with TFC, also believed that it was pivotal for coaches to create an environment where players could express themselves freely without pressure to win:

[Quality coaches] need to ensure they understand how to create an environment that drives individual development within a team context...the team is not the be-all and end-all. A quality coach needs to ensure that [the environment] does not become results or outcome-oriented...we [as coaches] want to create an environment where players can constantly express themselves. Each one is going to bring a unique flair to the game.

The term honesty was also mentioned regularly as a critical trait of coaches who worked in a quality talent environment. A provincial team coach in Ontario also said that the coach's mindset and behaviours were crucial. "The person leading needs to be someone who cares about the players... That is the mindset we must have as coaches.". This same participant stressed the social component of talent development environments:

Coaches need to be responsible for creating the environment...all sports, whether the more high-level ones or not, bring us so much social value for the players...I like to say we are developing humans before we are developing soccer players because those humans need to contribute to society and do the right thing in the community.

A participant who was the Director of Development for a PSO, also stressed that having women's spaces as coaches or leaders in the talent development environment was important, especially in settings specific to young girls players. "Female spaces would be important, be part of a good [talent development] environment...appropriate leadership is key, it does not have to be the head coach of a team, but some female coaching spaces would be an important part of a safe environment for female players." Several participants noted that there was an effort in

various provinces to increase women's access to coaching and leadership positions by creating mentorship programs that are only allowed for future women coaches and managers.

Most participants felt their province needed to deliver a quality talent development environment. Answers centred around items including a lack of human resources, a lack of adequate infrastructure for high-performance training, and a lack of appropriate playing competition. One participant in Quebec spoke about how the Quebec provincial government creates quality sports environments within schools for future Olympians. According to them, the program benefited numerous sports such as cross-country running and mountain biking. It was something this person suggested soccer could explore as a means of combining school and high-performance training. Creating flexibility within the Education and Sports sectors to create an optimal learning and sports development experience for children and youth could be a feasible way improve personal development outcomes.

4.2.5 Coaches Need to Prioritize the Social-Emotional Well-Being

Participants felt that there were some risks to the player's health and well-being when they are involved in talent development environments. However, it was dependent upon the program they were involved in. All participants agreed that team sports could have benefits in all aspects of a player's life. The biggest issue one Private Academy Owner from the Western region believed was "organizations trying to be what they are not." For example, this participant noted "a grassroots club trying to offer high-performance or elite programming when they do not (or cannot) have the capabilities to provide it."

A High-Performance Coach from the Atlantic region felt that there was a health and well-being risk for youth athletes involved in any sports:

Especially when there are championships to be won, teams to be made, or trophies to win, or there is a belief that there are scholarships or pro contracts available to the players.... Many pressures put on young people must be managed appropriately by leadership, at home, and by parents.

There was an indication that quality program design was critical to youth players' health and well-being outcomes. A participant who was a Technical Director and Coach Developer in Atlantic Canada suggested this by talking about the difficulties that highly pressurized talent development environments have on adolescent players:

Environments that are heavily scrutinized and selection-based can cause trouble for adolescents... We need to be careful about how athletes are treated within them, because it is very easy to lose track of the person and eventually lose the player from the sport.

A consistent theme from the responses was how programs and coaches needed to be aware of socio-emotional determinants in children. One participant, a Technical Advisor and Coach from the Central region, noted that high-performance environments need a better job in this area:

I believe those environments need to start doing a better job on the social-emotional front... We are concerned about this, because we have learned much from what has been done in Europe. Some of the feedback from FIFA and the rules now mean you cannot move abroad until you are sixteen. By uprooting children, you are almost destroying some of their lives. Survivorship makes a great story, but how about the hundreds who did not?

It was reiterated that moving away from home too young could lead to social-emotional issues in children and youth players. A Regional Training Center Director felt that a player needed to be careful at what age they moved away from home to seek higher training opportunities:

First and foremost, be careful with moving.... I would advise against it before the age of fifteen or sixteen. Players sometimes do this at thirteen or fourteen and go live alone.

That is tough without your family.

The Technical Director of a Community Club located in the prairie region described how many children stopped participating in soccer because of the pressures placed on them by talent development environments and their parents or caregivers.

I have seen more kids severely dejected by the game. The kids have their heads down; the game has been taken away [from the kids]. These [talent development] environments have so much pressure from top to bottom that kids must bear the brunt of it. All the players can do is fail. If the player has success, well, that was to be expected. The player, though, is in an environment where all they literally can do is fail. The goal is for you to have many failures and learn from them.

The Technical Director also described situations where youth players not informed about the realities of competitive sport by their coaches resulting in mental health concerns for many players.

However, you are cut in these current environments if you fail. Then you got to “face the music” I have seen programs locally where it is everyday training early in the mornings,

then one day, at the snap of a finger, it is told to the player, sorry, you are not good enough, or they are not moving on to the next level. The youth player can mentally go right off a cliff. Often the player is given a false sense of hope and not informed of the realities of the sport.

They also commented on the pressures of parents and caregivers that came from the high costs of youth sport at a competition level:

Parents pump \$3,000 into their child's development. They are bringing their kids at four in the morning for training. Your parents had put in 15 years, and they put in \$70,000. And all these tracksuits and all these trips and flights. The parents invest all this time and money in [their child], and [the child] just wants to quit the game.

Despite these concerns, participants also said that when done correctly, a talent development environment for youth can allow them to learn valuable life skills that will help throughout their lifespan. One example of this idea was poised by a Coach from Newfoundland and Labrador:

Team sports, in general, offer quite a significant benefit to young people in terms of their development as people outside of their sport... They can learn the importance of hard work, discipline, commitment, teamwork, and leadership and how it can help them later in life.

It was also noted that a strong leadership group of players and coaches could help with the socio-emotional development of younger players, including their life skills or character development:

[Through soccer], you are learning life. Those [adolescent] ages are essential learning experiences in life, and often you are learning life through the lens of an older age group who is lived those years and has paved their way. Now they are influencing one. So, if you are with a poor leadership group in that team, you might not lead that sixteen-year-old on the right path.

These comments show need for coaches to focus on the social component of the Four Corner Approach and the importance of organizational culture in talent development environments.

4.2.6 Summary

The participants of this study thought that it was problematic to label children and youth players as talented or elite at an early age because it diminishes potential for growth. Early talent identification or talent players were not thought to be healthy for children and youth players. The coaches interviewed preferred to keep talent pools open and accessible for as long as possible because of the unpredictability of talent development in children and youth aged players. Participants also described quality talent development environments as one's that were holistic and player-centered, had quality coaching, and prioritized the social-emotional well-being of the player. Coaches believed that standards were important, but there was more of a need to focus on the needs of the individual, provide a culture where players could express their abilities freely, and grow confident and competent players.

4.3 Equity, Diversity, and Inclusion in Talent Identification and Talent Development

4.3.1 Context of Diversity and Inclusion

Participants were asked a series of general questions about diversity and inclusion to explore how the concepts are applied throughout the youth soccer system in Canada. Many felt that there was a willingness amongst stakeholders to include more players throughout the

development pathways. “The more we include people,” said one Technical Director from Atlantic Canada, “the more we provide everyone the chance to reach their best performance.” A provincial team coach in Ontario shared that there had been significant progress at the provincial and national levels in incorporating both philosophies into the sport. However, they believed “much learning had to occur at the [community] club level.” They added that there was still a tremendous discrepancy in how they are applied. “There would be some clubs that are excellent in [inclusion and diversity] areas, but some [clubs] are going to be just shocking when you look at it critically.” Some coaches noted that best practice throughout the system was likely improved because of the establishment of the Canada Soccer Club Licensing Program and improvements in coach education offerings. A Technical Director at the community club level claimed that the Club Licensing Program was helping in “making sure that organizations have good systems in place for their players, staff, and volunteers.”

Several participants noted examples of how the soccer community embraces diversity well. “In terms of the LGBTQ or newcomers' community, I have not heard or seen of any cases where players are not accepted for those reasons,” said one participant from Quebec. Another participant in Ontario felt that soccer was only starting to dive into that area more actively, which presented challenges because of the lack of knowledge amongst the sport’s stakeholders. “We are learning to navigate this from a language perspective, which coaches are more attuned to because of mandatory education included in Canada Soccer's Licensing Program, which they have to take to coach in these types of environments,” they said. A participant with significant high-performance coaching experiences for women and girls also expressed how incredibly diverse women’s soccer was in Canada. “Women and girls' soccer is an incredibly diverse community. I think players' understanding of accepting different ethnicities, sexualities, and

genders is quite high.” This same participant also explained that diversity training “within groups done by independent people” was beneficial. They also commented on how continued education is critical, “I think that education is so key in these spaces because women’s football, and hopefully men’s one day, is super diverse...It is one of the cool things about women’s football.” One participant noted challenges with the inclusion of different gender identities, however. “It is a new space for many people that do not understand the subject area enough...We have not educated ourselves enough, yet we have a huge responsibility to learn and remain inclusive and accessible to everybody.”

A participant from Ontario who was a Coach for high-performance women players expressed a viewpoint that there was still a tremendous amount of sexism and racism involved in youth soccer. “I think there is still much sexism in the sport, and there is certainly much racism... I am struck by the fact that what youth sports get away with would never be tolerated within the public education system.” This coach also expressed some concerns about how the decisions and behaviours of coaches can promote exclusion and ruin the sporting experience for children and youth:

There is also not much tolerance for kids who are late bloomers in terms of talent.

Coaches and often technical directors and club managers make decisions quickly about whether a kid is good or not. Furthermore, they will invest heavily in those they think are excellent and ignore others. Then those kids drop out, and we never know what they could have been. So, there are lots of improvements to be made.

Some coaches noted that there was more willingness to include more players across the talent pathways by creating larger selection pools. Participants were adamant that the soccer

system was “driven by a pay-to-play structure” that produces massive amounts of exclusion because players and their families cannot afford the costs associated with participating at competitive and high-performance levels of the game. One participant from Nova Scotia noted that the cost of youth sport has made “elitism,” which “eliminates large sub-sections of potentially talented athletes.” Participants also indicated that early specialization and training structures forced players to choose sports sometimes at an early age. One participant, a former Technical Director at a community club in Manitoba, noted that the “one-season model” used in Manitoba was a disaster for inclusion by forcing multi-sport athletes to pick which sports they would focus on.

4.3.2 Significant Inequities Exist in Talent Identification and Talent Development

When asked questions about equity, responses appeared to depend on the person's professional context and lived experiences. According to the participants, many barriers to the talent development systems made it inaccessible for many players. However, many thought that considering the current youth soccer climate, programming was generally accessible at the grassroots level but not for players who had the potential to enter high-performance streams. One PSO's Technical Director claimed that in their province, they do an excellent job of maximizing opportunities on both boys' and girls' sides. "In terms of gender, we do an excellent job of ensuring that there are opportunities for boys and girls to play soccer...At the grassroots level, this is true; you want to get to more out of the top end of that [development] pyramid." A prominent women youth coach from British Columbia participant explained that the development pyramid was equitable until you reached the peak levels of the game. “Without a women's professional soccer league in Canada, [the system] cannot be equitable," they said.

Other participants also felt that the next step in creating an equitable system in Canadian youth soccer was to have Canadian women's professional teams that competed in the United States Women's professional league, the NWSL. A Canada Youth National Team coach also said inequities were created at the top of the pyramid by introducing just the CPL for men and not a CPL women's league. However, they quickly noted that there were many opportunities for females locally to play the game at a reasonably high level. They said, "I would agree that at the top of the pyramid, there is a disparity but not so much at the bottom...in Ontario, for example, there is one outlet for the boys (TFC academy) and only one outlet for the girls (NDC) to move to the youth national teams or perhaps a professional league. A participant from British Columbia said that there were equal spaces for men and women in talent identification and talent development, but there was an apparent lack of professional opportunities for women:

Equity means a lot; we put men's and women's programs hand in hand with the same facilities, sponsorship levels, and coaching resources. There is not one vision; the clubs have gone in with... they have gone in with an idea to create a whole club. [Men's and women's] programs get equal love and attention. Both sides are constantly developed.

So, the good stuff is happening in those spaces, but professional opportunities for women are lacking.

A participant from the western region who worked for an MLS team's Youth Academy felt that 100% equity was a "utopia" for soccer in Canada. However, they believed that everyone in the system tries to do their best for the players and their families to establish equity in talent identification and talent development:

Everyone has an equal opportunity; you can try to do your best... at younger ages trying to create larger pools and do more [talent] discovery situations or letting the players play more with their clubs. Making the entire system equitable is difficult; families and players all have different issues, but we try to do our best for the kids in our system.

Some identified that inequities in the systems and structures of youth soccer were apparent by how few provinces are represented on the rosters of national soccer teams. "You look at the senior and youth national teams," said one participant, "it is all Ontario, Quebec, and British Columbia...maybe some from Alberta." Another participant from a smaller province noted:

When did you last see a kid from Saskatchewan, PEI, or Newfoundland on a national team? It is not because there is no talent in these provinces. When was the last time someone looked there and was willing to give a player an opportunity? That, for me, communicates to kids from smaller provinces; no matter how good you are, you will probably not get selected for a national team... There is no openness [selecting players from smaller areas] at any level.

A participant from Atlantic Canada also felt that players residing in small provinces miss out on opportunities with players from more prominent centers. This participant stated that players from Atlantic Canada were automatically excluded from the three main professional academies (e.g., CF Montreal, Toronto F.C, and Vancouver Whitecaps) because of the academy's finances:

It is just not as financially viable for professional clubs to bring in players from [smaller province] ... There are certainly more steps in the pathway [our province] would like to

access. If talent pathways intend to move players towards a high-performance environment or a professional/national team level, most provinces miss out geographically. We do not have the same opportunities for players across Canada.

At the provincial level, participants believed inequity existed between urban and rural areas. Participants described significant challenges for players living in rural areas accessing the same resources that urban players receive once they filter into a high-performance setting. Some felt this was related to the geographical makeup of Canada. For example, one participant in New Brunswick, a Technical Director said their “province does reasonably well, but it is extremely difficult for [players in] rural areas, just based on our province’s geographical makeup.” Another participant thought that there was an evident lack of resources available to rural players that left them with no other choice but to move away from home:

[The talent identification and talent development pathways] is generally equitable, but there is an apparent lack of equity within the rural areas...I do not know why that is the case, but I assume it is because there is not as much soccer played in some areas of the province. Most of these smaller areas lack facilities, coaches, and even players. Players must move to other soccer environments to help themselves achieve higher levels.

A participant from Quebec, a Technical Director and Men’s USport Coach, recognized that there was a significant difference for players living outside the greater Montreal area. This participant also noted that Canada’s biggest challenge in terms of equity was “the sheer size of the country.” They also shared some of their experiences while coaching in other countries. They said that youth national teams in some countries would go to school together and train on the

same site daily. This was thought to be quite advantageous for developing players. In contrast, a national team program in Canada must bring players from Canada, the United States, and Europe to camps, costing thousands of dollars for the NSO.

A participant in BC who was a Technical Director in a rural community, described how their club's players often had to make three-hour return trips weekly to train with the provincial program. They added that with inflation and the increases in the price of gas, these players' families were paying hundreds of extra dollars a week on top of registration to be able to drive to training. A participant, who worked at a PSO in the prairies described Manitoba as "incredibly unique" because the province's soccer system was "unbelievably city centred."

Depending on your stage and age, everything ends up turning into Winnipeg...There are many challenges in the province regarding travel, some places to the north are eight hours away, and they are small communities...that create challenges around finances and time commitments... It is difficult for a provincial organization to accommodate all the players in such a situation. It is an interesting conundrum we find ourselves in to provide opportunities for players.

A key theme of equity and what is offered to rural versus urban players is the centralization of facilities and programming. One participant, the Director of Development for a PSO explained:

Most training happens in a more prominent center because that is where the facilities, population, and coaches are...but it is primarily centralized. ... it does make it harder for those in rural areas. However, the provinces made that decision knowing that

centralization would create a challenge for rural kids, but it is still better than a decentralized program.

According to a PSO's Technical Director, centralization has created a lot of unforeseen consequences that exclude players from high-quality talent development environments:

Players in rural communities must sometimes travel long distances regularly on their parent's dime to train in the more prominent centers. They then go to school in their community with no support to train... This suggests that logistics are the most significant barrier to an equitable talent development system. There are obstacles in Canada that make programming unintentionally inaccessible for users.

It appears that rural players and players residing in small provinces have significant challenges to participation in talent development pathways and lack of access to necessary resources that would aid in their development. Players in Canada's three most populous centers (Montreal, Toronto, and Vancouver) appear to be primarily selected for the National Team programs and progressing to the highest levels of the game.

4.3.3 Age Group Banding Hinders Talent Development

Participants believed that age group categories significantly impacted the development of youth soccer players. There was a clear understanding amongst all participants that players born early in the calendar year have an advantage over those who were born later in the year. A community club Technical Director who has worked in several regions of Canada commented on how much of an advantage the relative age effect creates:

The relative age effect is massive. Suppose you are a lucky one born in quarter one or maybe quarter two of the calendar year. In that case, you are going to get a better

opportunity...It creates an unequal sort of opportunity, especially at younger ages when biologically, you know, maybe socially, emotionally, they are not at the level of their same age group.

A Youth National Team Coach also noted that age categories for youth competitions at the international level are often double age banded, creating a scenario where teams are “heavily stacked” with older players for the age grouping. They also added that most national team selections come from professional clubs and the professional club with similar age banding. This participant said:

When we look back at five years of selections, we live in elite programming, so there is a definite bias toward the start of that earlier birthday. The trouble is that there is pre-selection at the clubs and academies, so by the time they get to an elite level, the kids that are born first have had more hours put into them and have more specific training because early developers are prioritized over late bloomers.

A Coach in British Columbia also commented on the impact that physical growth and the accumulation of training hours have within each age band:

The age gap could be as much as eight or nine months, which in children makes a big difference; there is much growth that happens... Even up to eighteen and nineteen, players are still growing, and physical ability is a big part of the game...Then there is the accumulation of training too. If you are four or five years old, that nine months difference is probably a lot more time that you have had a ball with you.

They also referenced maturity, which also could have a significant impact on the social development of the player:

Maturity from a psychological perspective can sometimes be two or three years based on where they are developmentally...So I can think of several scenarios where someone felt like a 15-year-old playing against an 11-year-old.

Another participant, a Technical Director and coach in Saskatchewan, identified that the relative age effect impacts the number of players in Canada who are placed with quality coaches. They believed quality coaches are often placed with premier-level teams that are made up of older players:

We have better coaches who want to coach premier, and some late-developing players never get an opportunity to have an excellent coach to help them progress...This is another reason we should have more open rosters and flexibility in our training groups.

The theme of “flexibility” frequently appeared in the responses. Participants clearly desired more opportunities to move players up and down age groups. They believed that this fluidity was a key component of making soccer programming more player-centred and inclusive of the development needs of each player:

We must put players in the environment that best suits their pathway to reach their maximum potential. If we put players in a box and say, ‘you will train with this group all year, [talent development] will not happen.

A participant who is a performance analyst mentioned that the key to a player-centred approach was to “involve the players in decision-making for their development and the team’s learning so that they can take ownership and accountability for both.”

While participants encouraged mechanisms that would allow players the flexibility to move to a better-suited age category, they also suggested that clubs across Canada would be hesitant to implement such a policy. One participant who was a prominent MLS academy coach stated that age groups “could probably be more fluid sometimes. I think clubs are hesitant to put early developers with a higher age group because they want to win the other age group.” Another participant, the Technical Lead of a PSO, added that the age groupings and system essentially isolate players:

Age groups cater to a handful of players. The systems we have in place do not allow for any room to be as flexible as we should be [in moving players up and down age categories]. There need to be some exceptions for these things. For me, having strict and rigid age categories is a barrier and a hindrance to the overall development of players. Having more flexibility would go a long way. If a player is a late developer, the player should be allowed to play a year down with the younger players.

A participant who was originally from Europe stated that this sort of practice is commonplace in many European countries. Another participant with some experience in a European country agreed that this was common in that country but also said that in Canada, “we do not have the same resources available, so we tend to have mixed age groups.”

A participant, who was a youth academy director with senior professional coaching experience in England, felt that flexibility was critical at younger ages to prepare players for senior levels where there are no age restrictions:

Within our league structures, we should allow kids who are more mature to play up an age group but also let kids that might be less mature from a physiological standpoint play down... The higher you go, the less of a factor it should be because when you become a professional or a senior player, there are no age limits, so it becomes less relevant for me when you talk about top-level players... They eventually have to do it.

Many participants believed that implementing a policy encouraging flexible age groups was difficult because it was challenging to convince parents and caregivers of such a policy's merit. One participant, a coach in Newfoundland and Labrador mentioned that from a "cultural perspective," the parents and caregivers of youth players were not ready for fluidity in youth age groups. A coach in Manitoba admitted that this was a "tricky" and "tough sell for Manitoba parents [and caregivers]" because of their influences, wants, and desires for their children. "As a society," one participant from the professional youth academy explained, "we are very good at putting people or players into boxes. [Moving players to different age groups] would be more of a problem for the adults than the kids because the kids want to play [soccer]." One participant suggested that having their constructive conversations about a youth player's development plan with the parent(s) and caregivers would be an effective way to mitigate this problem. This participant provided an example of when speaking to a player's parents was helpful to the player's development:

We had a late developer in our program when he was sixteen, so they played on four teams. After the season, I had an excellent conversation with the parents and the player. He was a December-born player, a good player, an intelligent player, coordinated, and a good finisher. Still, we told the parent that they might not catch up (physically) for two or three years, and it would benefit them to stay down and play with the age group below. Having a conversation with them helped them understand the best situation for the player in the big picture.

It was also stated that North America's current youth sports culture prevented youth players from being held back in a lower age group. A Technical Director in Atlantic Canada discussed how parents and caregivers would likely view a player being held back as someone who was singled out for performing poorly.

From a [sports] culture standpoint [in North America], many people are not ready for [holding youth players back an age group]. People resist it; they feel like their child is being singled out and that they are treated poorly. They do not see it as an opportunity or a benefit to themselves. The older, more physically mature group will always be perceived as the better group, whether that is accurate or not.

Another participant, the Director of Development for a PSO in Atlantic Canada, agreed with how difficult it would be to convince parents whose child was held back and age group away from their peers:

If you hold someone back, you might see some pushback from the child's parents. I think there is a stigma around it...that needs to be addressed, even with buy-in from the player.

The parents might see this as a demotion, or their peers might view the player differently, and it could cause some social-emotional issues.

A professional academy coach believed that age group flexibility indicated that the development environment was “truly player-centred” but explained that it was unrealistic to expect to be able to hold players back or move them ahead fluidly if the coach was in a community club setting:

In the current climate where adults, rules, and policies exist, I am not sure how realistic it is to hold several players back...unless you are in a high-performance academy or professional club where you are not necessarily competing to win the leagues or anything. There is an ability to hold a player back for another season.

A participant shared that despite some concerns shown in their context, they had seen a slight increase in requests for players to be held back. This was primarily due to families who preferred their child to play with their friends from school, not for the player to be placed in a better talent development environment.

4.3.4 Bio-Banding Must Consider Social-Emotional and Physical Aspects of Youth

Participants provided some thoughts about the use of bio-banding (i.e., the grouping of players by biological age as opposed to chronological age) in youth soccer programming. There were mixed opinions about the impact of bio-banding on youth soccer player development. One technical director whose club experimented with bio-banding concepts said that they believe the negatives outweighed the positives. Even if their club placed players in groups based on physical abilities or physical statures, they noticed a negative impact on the social-emotional outcomes of their players:

Often, we remove [the player] from their social group. So early developers, even though they are playing with older players because they are more physically developed, it becomes more socially challenging for themselves and more disconnected from others.

Other participants agreed with the social-emotional complexities created by using bio-banding. One participant in Ontario stressed that coaches needed to look beyond the physical attributes of players when making decisions about a player moving to another age group:

If we play the player down, but he has nothing in common with his peers, and all they have in common with other players is their size, that will not be too rewarding to the player that is moved up. We must think beyond just their physical attributes.

An Ontario participant, a Provincial Team Coach, did not think bio-banding was relevant and did not believe in "decisions for the player to play at a level solely based on their physical attributes." Instead, they thought those decisions should be made for "technical and social-emotional reasons." The participant said that biobanding was useful because "[when the player] is returning from injury, and they need the opportunity to be in an environment that will help them recover their confidence."

Another coach in British Columbia with the professional youth academy who felt that bio-banding was not a credible tool for youth player development suggested that combating relative age (when youth born in or close to the cut-off period of an age category have a physical and social advantage over those born later in the cut-off period) could be done through a coaching staff who "understands and ensure that games and training were selected for the right

individuals, at an appropriate level where the games and training are not too much of an over challenge and not too much of an under challenge.”

Interestingly, one participant, a high-performance coach in Nova Scotia felt that bio-banding organically occurred in rural settings with a smaller player pool. This same participant noted that bio-banding was less of an issue in high-performance environments because when players outgrow a training environment, they are typically given a challenge at a different age group. They described a policy that they created within their programming that provided players with a playing challenge but kept them with their peers:

Our program developed a policy where you could call up a player four or five times through the summer, giving them some experience and challenge, but they play predominantly back where they belong age-wise.

Another participant who was a Technical Director in Saskatchewan provided a similar response by offering ideas about how to use mix gendered competition:

It has value, but you have to be strategic; for example, if you have a community where there are only two boys’ teams and two girls’ teams, well, you cannot have a league if you only have a boy’s division and a girl’s division so why not combine boys and girls into a single division. Smaller communities will not have an issue [because they likely already mix some age groups, so bio-banding] is valuable to them. More prominent communities [bio banding would be] valuable based on the end goal [of the club].

From the results it appears that bio banding is a viable option for providing challenge for adolescent players, but coaches must carefully consider the physical and social development of each individual player before making a decision to move them up or down and age band.

4.3.5 Socio-Economic Status and Exclusion

Participants suggested that socioeconomic status was a determining factor that limited talent development in Canadian youth soccer and all youth sports in Canada. The Director of Development for a small province in the Atlantic region explained this:

Unfortunately, the reality of our sports system in Canada is that it severely disadvantages people who do not have certain socioeconomic means...Just in the realities, we all operate in, there are significant costs to operating programs, facilities cost a fortune, as does good coaching...Part of [the player's] development is good competition, whether that is a league or a tournament, in almost all cases that's outside the province and a flight... High-performance soccer [is now] just for the kids who can pay, not the players who deserve to be there...talent is just not enough anymore.

Another participant, a Technical Director in the Central region, thought that high operating costs were just a by-product of making soccer more accessible: "The changes in structure (e.g., more programs and required licensing introduced) has just made soccer more expensive, and participation prices have increased. More programs are being introduced to make soccer more accessible, but it is making soccer much more expensive than what it used to be."

A common theme was that players were excluded from talent identification and talent development environments because they could not cover the costs associated with participation. This was a prominent barrier in areas like inner-city neighbourhoods and within underserved

youth and children. "As long as we are in a system driven by a pay-to-play kind of structure, talent development will be very heavily financially based... It is always going to create a small pocket of exclusion, especially in specific populations of people," said a technical director. A participant in Ontario who is a Professional Team's Academy coach noted that there is a substantial number of immigrants and refugees from more low socioeconomic communities that are unable to participate in high-performance environments:

In Ontario, there is a strong newcomer, more socially low economic community. Those kids do not have a chance to pay for the provincial program. These [private] academies in Ontario charge \$18k a year with a promise that [the player] will get a scholarship or contract are unaffordable for most players.

Another participant who was currently coaching Men's U Sport soccer in Atlantic Canada also suggested that the cost of sports has increased exclusion in general: "The cost of sport has become pay-to-play elitism, eliminating another pool of players. Travel for competition has increased significantly, so accessibility and inclusion have decreased."

Participants believed that there were efforts in community clubs to try and minimize the costs of youth soccer on families. "There is much work going into it now with different programs, whether financial support or scholarship programs," said a participant who was a Technical Director in the Central region. A participant who operated a private academy said that they had many players supported through financial aid, but they added that their program was "only improving the players that can afford it." This private academy operator spoke openly about the business side of their academy, saying that "everything is expensive...Because I am running a business, I often think, am I only giving players who afford it the advantage." Despite

there being numerous organizations that help ease financial burdens, there are other hidden costs that some families cannot afford. One participant, a Technical Director in the Prairie region noted that they regularly needed to ensure players has access to food on trips or transportation to get to and from games. Another participant, who had experience as a Technical Director of community clubs in several provinces indicated that increased registration fees were just an unforeseen consequence of enhanced club licensing and coach licensing requirements:

You try to fix one thing, and something else is affected. You fix safety with criminal record checks and ask that every club train appropriately as coaches and officials with mandatory certifications. Ultimately, it falls to the end user, the parent, or the player to make up the added costs through their registration fees.

One example, provided by a Director of Development in Ontario, to help families reduce registration cost was when clubs or programs ask for a T4 slip and requires them to pay fees in relation to their earnings:

The family submits their T4 summary from the end of the year, their tax statement summary, and some other elements. That is how the league decides their fees. [The leagues] do something similar; some clubs tie it to the club, the team, or the player receiving funding from Jumpstart. So, they apply for a jumpstart in parallel to submitting a T4 form. The club will sometimes match it or take the report from Jumpstart and decide internally, based on their point scales and point systems, how much the family pays for fees.

A participant who was a coach and club Technical Director in Manitoba also identified how the operating costs of the club were pushed back on the players:

The “model clubs” have high costs; typically, that cost is transferred to the players in fees. The costs to meet strength and conditioning, nutrition, psychological testing, four plus days of training a week, and the competition they enter. The costs can range from the mid-2000s [dollars] to the 5000s [dollars] as a total financial commitment for playing high-level youth soccer.

Indoor facility costs were also seen as a reason why costs are rising. With Canada's long winter seasons, indoor training is often primarily done in artificial turf facilities. In most centers, very few indoor synthetic turf facilities increase the demand for usage. One participant from Saskatchewan said:

Right now, it costs me an arm and a leg to train with our team because we do not have access to an indoor facility. It costs about 400 dollars an hour to use. Where are you going to find that 400 dollars regularly? Well, you have two choices. You either charge the kids or you work on sponsorships.

One participant who was coaching in the Prairie region suggested that clubs should be more strategic in how they use facilities to reduce the cost of registration and make the game more accessible and affordable to families:

Clubs need to be more strategic in utilizing facilities to make the costs cheaper for players. That would mean high school gyms for futsal. I also believe there is a general

lack of accessibility. We need more publicly accessible spaces, mainly because of the winter, given that most of Canada cannot be outdoors.

Another participant who was the Technical Director of several community clubs in Manitoba also shared a perspective that community clubs are based on a business model and therefore ignore inclusion. Instead of focusing on talent identification and talent development in player development, a club and its staff are more concerned about budgets and salaries. This participant described what he saw in their province:

[In my province], I do not call them clubs; [the clubs] are eight [different] businesses...The business model is one of winning. You do what you do as a technical director to keep a job; their goal and that of their clubs are to win; winning trophies bring more players registering, so it is not about inclusion.

Other participants explained that clubs are often so dependent on registration fees that it impacts all the clubs' decision-making around what it can offer its players. One participant claimed that:

Clubs are immersed and dependent upon registration numbers. Registration fees keep the club running and keep the staff employed. I see too much reliance on registration fees hindering opportunities for players, so the clubs must be more innovative and strategic to include players.

Registration and hidden costs were seen as a more impactful barrier for high-performance or "travel teams." To get consistent, high-quality competition, many teams, especially those in

smaller, and less populated provinces, must travel to different areas or abroad to find good competition. A high-performance coach in Quebec described the cost differences between Canadian and European youth players. “If you play in [Europe], you get everything and the use of excellent facilities for probably 150-300 dollars a year. In Canada, players pay 5000 to 10,000 [dollars] annually.” Another participant, originally from Europe but now coaching in Canada, believed that this difference in cost between European and Canadian programming resulted from a funding and player development structure created, operated, and heavily funded by “professional soccer clubs.”

A national level coach explained that once youth players enter elite environments in Canada, like a professional club’s academy or youth national team, they do not have to pay to play or train. However, they added that “it was too expensive to play in local leagues, and if you wanted to get noticed for more elite programs [where very few players make it], youth players had to play in these expensive local leagues.” This participant described how players had limited options to play in settings that link to academies and national team setups:

Often, high-performance academies, which link into a national team set-up or professional clubs, are in major centers, and there is no support for athletes who need a place to live. For a player to be identified, they need to be training at a club and play at [the highest level of youth soccer], which costs a lot of money. They can only get scouted and join provincial teams and national programs.

Programs in some areas cannot offer this link because they must adjust what they can offer to deal with the constraints of their specific context. A PSO’s Director of Development from Atlantic Canada explained that they tried to offer players an appropriate level of programming

that kept talent identification and talent development accessible without incurring high costs for the players:

When planning or delivering a program, try to pick a point. You cannot shoot for the absolute moon and say we are going to be [travelling] once a month, and we are going to train six days a week, and we are going to have the best fitness trainer here. You try to pick a point where you deliver your program and offer to make it somewhat accessible.

The more elaborate the program is, the higher it will cost the elite. The lower the program elements you offer, the less quality the program will be. So, try to pick it at an appropriate level.

Money is a significant determinant for sport participation particularly at a talent development level. The costs of registration, travel for competition, additional training and equipment is excluding potentially talented athletes from accessing the systems and exposure needed to reach their potential and be identified for higher competition opportunities.

4.3.6 Accessibility and the Birthplace Effect

Participants strongly noted the significant disparity in players selected from urban centers versus rural centers and populous provinces versus less populated areas. This was particularly evident when looking at selections from Canadian Youth National Teams. One participant, a coach from the Atlantic region, noted how Canadian Youth National Teams are always selected from the same talent development environments:

From a national perspective, I think it is striking when you look at any youth national team selection and you count the number of different environments that are identified; the players are coming from three or four centers playing in one of three or four leagues on

one of a dozen clubs or organizations...There is a lack of acknowledgment of places outside important centers.

One coach of a Canadian Youth National Team stated that they see the “makeup of [Canadian] national [team] programs coming from just British Columbia, Ontario, or Quebec” but reasoned that probably had to do with the "opportunities the players in these provinces had growing up, like the competition and standards they had around them, the coaching and development opportunities that they had year-round.” A professional youth academy coach also commented that developing more talented players in larger provinces was much easier because “the density of the better players is usually higher, which allows players to be more challenged at critical points in their development.” However, some participants did seem to think that the effect was not as simple as it appeared because, as the professional youth academy coach said, “Players in other sports, like hockey, come from small towns and benefit from being a big fish in a small pond.” For some youth players, that "is better for them to develop in, whereas the others do better in environments where they constantly get challenged.”

One participant with experience at the National Training Center and with Canadian Youth National Teams said it was clear from their own research that national team players come predominately from Ontario. This participant reasoned that there were better talent development environments in Ontario and other large centers with professional clubs and academies. This participant described what they saw in player selections at the Canadian youth national team level:

When you dig deeper, most come from the Greater Toronto Area, specifically Vaughan, Mississauga, and the City of Toronto. A few might come from British Columbia and

Quebec, with maybe a few other provinces sprinkled in at the youth level, but you must ask yourself where the best talent development environments are.

This participant also provided some valuable insight into the Youth National Team selection process and why it is advantageous for a youth player to be a part of quality training environments and play against the highest competition if the player wants to be selected for a Youth National Team:

What would you consider optimal training environments in Canada for talent development now? Currently, CF Montreal, Toronto F.C., and the Vancouver Whitecaps academies tick those boxes because they play in MLS Next-Pro, the highest-level competition against MLS teams... When I scout [the players], they play against Mexican and European clubs that are high-level matches for a 15-17-year-old player. [The professional clubs have] quality training environments in the four-corner approach because it is funded by the first team, which generates revenue. So, it is evident that being in those provinces is an advantage, and why most youth national team players come from those environments.

Being more specific about how the selection process works, they stated:

If you go further and look at the world map when you look at the depth chart, there are quite a few players eligible for Canada; you must think, are they playing ninth division for clubs in Europe? Or are they playing for a top academy that is first division? Then it would help if you compared the league tiers versus MLS. Then is that player playing minutes? At what age group? You make those comparisons.

An MLS Youth Academy Coach agreed that players “needed to be in a good environment” but felt that a good training environment facilitated a player's growth was “very hard to find in Canada, especially in rural towns.” They believed players could make it to the highest level, but significant challenges prevent players from most communities from chasing their dreams.” This participant said they often thought about how far a player would have gone if they were in a big city instead of a small province.

One participant from Europe noted that in European countries, there are much more high-performance opportunities for players regardless of where they live:

There is a more significant safety net in Canada. You have one option where players do not have to pay [at a high-performance level] to play, so suddenly, soccer might cost you thousands of dollars to play at the highest possible level. In Europe, you leave one club, and many options are relatively close to you.

This appears problematic in Canada, where professional academies like TFC primarily consist of local players. Some participants mentioned the difficulties of having children move away too young to participate in an academy like this. One participant from Ontario who was a former TFC Academy coach said that they adjust a player’s development program by “supplementing the player’s development with their amateur club with individual programs” when the player is too young to move to participate in a training center or professional academy.

An ‘A’ Licensed coach in Atlantic Canada was adamant that urban players received more opportunities but disagreed that there was a selection bias against some locations in Canada:

Urban kids have more opportunities because of where they live. I do not believe that there is a selection bias; it is just that in an urban center, more people are playing. So, it is easier to find 'like-minded' individuals or groups, play more soccer... There are more leagues, games, practices, and facilities. In a smaller center, they could have the same desire or talent. However, they accumulate fewer quality hours without the same facilities, several programs, experienced coaches, and other kids who want to play.

Other participants claimed that players in urban areas had more competition with a greater speed of play. A Technical Director and 'A' Licensed coach in British Columbia, believed that the difference in the numbers of high-achieving players coming from urban areas came down to having more players with the same mentality, mindset, and aspiration :

It comes down to opportunity; bigger centers have more players and competition. The likelihood of them having better players is just from a statistical standpoint. However, you know you start talking about competition and the availability of different things you can do.

A PSO's Director of Development from Atlantic Canada said there could be a stereotype about where players are from when making decisions on what players are selected for teams. It is possible that some coaches reject players on the basis that the player comes from specific clubs or provinces. However, they also thought that selections probably came from selectors having more trust or belief in players they knew or came from specific programs that have had consistent success developing high-quality players:

A lot could come down to coaches [or selectors] trusting what they know. If it came down from a kid, you know, from a program in Toronto, and I know they do a good job, and that club has produced other outstanding players over the years. That is more reliable than taking a chance on a kid from [a small province]. Coaches must make tight decisions, especially for selections on high-performance teams. If coaches are only selecting players from select programs or show favouritism to certain provinces, it greatly reduces the opportunities many players have. These players could have equal or greater potential than those being favoured. If players recognize that they are not going to get opportunities, they are not going to have the belief that they can succeed. These types of talent selection decisions are based on a winning-at-all-cost model and not a development model that is inclusive and accessible to all players with potential.

Rural communities are significantly impacted in many ways by their lack of population. Participants felt that resources needed to be dispersed more adequately for smaller centers. However, a participant also said, “[provinces] just try to support them to serve the players as best as possible; that is the most effective strategy.” A technical director from a smaller province said that they see some areas of their province underrepresented:

Parts of our province are underrepresented because they do not have any population hub...So these communities cannot have the same services or resources that a more prominent center conveniently has.

They also indicated that rural players suffer from a lack of exposure:

Some of the best players I have seen have come from smaller communities, but I know a lack of exposure. So, if I did not take the initiative to find those kids, they would not have been seen or moved to the next level because of the exposure piece. Many of these

players with little access to opportunities are the ones that excite me because they have the most potential to grow.

A coach from a Canada's Regional EXCELL Center, spoke further about how this lack of exposure resulted in players from smaller communities having to move away at early ages if they hoped to have any chance of progressing to higher levels of soccer:

I see examples in the Yukon and Northwest Territories where players must go to Alberta and live there for a year and try to make something of it. Their progression increases within a year because they are now with like-minded players with better competencies.

Coaches do their best to help players succeed with what they have available to them, but the system appears to be excluding a vast number of players from the talent identification and talent development process based on where they reside.

4.3.7 Relationships Impact Talent Identification and Talent Development

Participants stressed the importance of positive relationships when developing talented players, especially during the player's first experiences with the game. The Technical Director of a PSO agreed that relationships were the most significant component of a youth players experience to manage and that it was important for coaches to understand how to get the best out of each player:

I agree that stress is a significant component to manage, and where it is your focus to go, I would say one of the biggest things that are hard, especially during COVID; I am not sure how much fault or ownership some organizations have to take. One of the guiding

principles here is the person before the player. How can you connect with the person before the player and see what makes them tick?

Participants felt that the role of coaches had expanded to include awareness of the social-emotional component of player development. One participant said that coaches needed to "know the ins and out of the player," emphasizing that it was important for coaches to get a thorough understanding of the players on and off the field. Others stated that the coach needed awareness of "what is going on in [the player's] personal life" or "how [the player] was feeling." Some said that the coaches had to build a relationship with players to understand "how they were motivated" or what was causing a lack of motivation. This idea would give them a strong sense of where the player was in their development.

A Professional Team's Youth Academy Coach noted how vital a youth player's first experience was to stay in the game and the connection those had to positive relationships:

With relationships, what is essential is ensuring the proper emphasis goes to kids when they are just started playing the sport—beginning at four or five years old, just making sure that we are not over-emphasizing tactics too soon or making the game too serious.

Expanding on the point of making the game competitive at a young age was a participant who was a technical director at a community club. They explained how parents and caregivers' behaviours made the game too serious for youth players and could stop a player from playing:

Many times, you see a parent be the reason that player wants to stop playing because he is just getting tired of being yelled out in the car ride home or because coach justice keeps

him on the bench or yells at them... [it is] embarrassing to [the player to be treated that way] in front of [their] friends.

This suggested that the positive relationships players had with adults (e.g., coaches, staff, parents, etc.) and their peers played a vital part in keeping children and youth motivated to participate in the game. In contrast, a High-Performance Coach in Nova Scotia also compared the positive relationships that they had on the soccer field with a coach to relationships that a schoolteacher had with their students:

Some children are blessed by getting a great teacher who impacts kids lives in meaningful ways that last a lifetime... Sometimes you are blessed with a coach who genuinely cares, has empathy and values, wants to develop you as a good person and builds relationships and communication.

Others, like a Technical Director in Atlantic Canada, made connections with how meaningful relationships were to create an inclusive talent development environment that focused on personal wellness:

Suppose we want an open, inclusive talent development environment that provides many to be involved. It offers an opportunity for people with different financial and socio-cultural needs. We need to ask how we keep players engaged in our sport. With that in mind, we need to have an idea of personal wellness and well-being, that we care about the individual more than the kind of the team or the group.

According to a participant who coached at the youth national team level, many coaches will base their decisions on relationships. They believed that coaches often based selection decisions on factors like “whom they could work with well or who will help create a healthy environment for everyone involved in the team.” They also thought that character traits like “responsibility, maturity, reliability, and work ethic” helped form positive relationships with teammates and coaches. These were all important considerations for coaches when putting together a team.

Participants also felt that social influences were a significant component of player development in talent identification and talent development. One Technical Director said that how connected a player is to their peers is needed for their sport experience and their development as a player:

The biggest influences are athlete influences; if the player feels socially comfortable in their group...they will continue to play, and you will go more. I find the kids that were all socially connected within their team, or their birth year played more soccer than other groups and were more interested and keener to learn.

A Director of Development in Atlantic Canada added that there was a connection between confidence and a player’s comfort with the environment or program’s culture. Confidence was identified as a critical performance indicator for a youth player: “Confidence and comfort sometimes go together if the player is socially settled. Being comfortable in their environment due to good relationships helps them with their confidence and performance. Confident athletes perform better.” The player's support structure was also deemed critical by a professional academy coach: “It will be essential for them to build skill sets integral to progressing through

the pathways to higher levels. Whether that is self-regulation, resilience, or even the ability to think and self-reflect.”

One of the main themes that arose from conversations about relationships was the role parents’ attitudes and beliefs played in talent identification and development. A Canada Youth National Team Coach explained how vital the parent-to-child relationship was in sports as players progress through the development pathway. Suggesting that development is not linear and that players often have to deal with setbacks, this participant said that parents “can pick their kids up from setbacks in a positive way to keep them working hard and keep them focused on what [the child] can control.” This identified a crucial means to keep children and youth in the game. Another participant, a performance analyst for high-performance teams, stressed that the parent was much more critical of the child's talent development than the role of the coach:

The parent has such a significant impact that we as coaches might spend two hours with them, but the parents have them the other twenty-two. It is massive for the players' mindset, perspective, balance, and encouragement, that is massive. We know that the coach’s impact can be detrimental or critical in a positive way to give them that confidence and opportunity. The exact result can be seen in the parent’s behaviour.

It also described how parents could negatively affect a child’s sporting experience and the talent identification and talent development environment for all players. A Technical Director in Atlantic Canada said that they saw parents put unnecessary pressure on their children to achieve standards, resulting in conflict with coaches and technical staff. This was especially evident in larger communities. According to them:

In bigger communities, I see way more pressure from parents put on players to achieve earlier and more tangible things. So, in those environments, there is way more conflict between parents and coaches and between parents and athletes and coaches. There is a perception that everything is the next step forward.

Many participants thought there was a definite connection between poor parental behaviours and how expensive youth soccer was becoming to participate in. According to one Technical Director with experience in three provinces, a club's player selections can be determined by a parent's influence or how much money they supply a club:

The biggest challenge in Canadian soccer sustainability is when you have a model where the parent has so much power over the club... You have a parent who has three kids; they are bringing, let us say, \$5,000 into your club, and you have another [player] who is a KidSport player, who cannot afford it but is the best player; you, as a club, have a choice to make. If you play the best player will down the road, these parents paying much money...are they going to get mad? Will they go to a different club, and will the club lose \$5,000? The club has to ask what is more important to them, supporting the player or protecting their finances.

Another participant, a Coach in a Community Club, added that politics (e.g., acting in a manipulative way for some personal advancement) in youth sports generally play a significant role in talent identification and talent development and who is selected for teams. They thought that parent's involvement in sports came down to how it could benefit their child:

Our model in North America is probably more than you should have. I mean, we see it all the time, you got parents who join the club's board of directors, and they try to influence the club in terms of how things are run. And then it is done generally to benefit their child. And then, when their child leaves the club and they are no longer on the board, things change when the next one comes in. So, it indeed happens. It is partly based on the model we have in this country.

Another participant who was a Technical Director and coach from the Prairie region also believed that the ability to pay fees determined who was selected for teams. They said, “if somebody is underprivileged, they could be the better player but the [career-oriented] coach might say they have another family willing to pay \$2,000 to make my program run and pay my salary.”

Parent behaviours continued to appear regularly in participant responses. “There were always battles with parents when I worked at [a community] club ,” another technical director participant claimed. “I found that that [parents and caregivers] were much more vocal in a [playing] environment with more competition.” This statement justified some accounts of why standings and trophies were eliminated at the grassroots level. Another participant, a coach and technical director in Manitoba, noted instances where entire teams of players would leave youth clubs to be at another, showing how much influence parents could have on the club’s success. A participant, a technical director of a community club in Atlantic Canada, thought that parents impact talent identification and talent development by influencing programming to align with their beliefs:

We find that parents influence program design and aspects of our programming. What they would like to see for their children, and then we provide programming in line with it. It probably differs between a large center and a small center, wherein a large one; we might choose to offer programs to encourage people to register. If there is one community opportunity, we are working to align with what the families in our area would like.

Another participant who was the Director of Development for a PSO thought that players would only be affected by their parent's or caregiver's behaviours if it was seen to be extremely problematic to the program:

The club is trying to look at the players for the most part. For a decision to be made on a player based on the parent's behaviour, the parent would have to be utterly toxic in their interactions.

However, a Director of Development of a PSO in Atlantic Canada experienced player selections methods that were made based on relationships between the coaches, board, members, and parents that resulted in specific players not being selected for teams:

There are decisions made at clubs with the last couple of choices when picking a team where social aspects or parent relationships might sway a coach. Alternatively, it might be easier to choose a player because if you do not, there will be a problem with the parent.

Relationships are meaningfully attached to talent identification and talent development of youth soccer players. The participants' responses highlight the importance that social-emotional outcomes have towards youth players growth and retaining participations. Coaches, parents, and peers need to be aware of the amount of pressure applied to a youth aged player before they are ready to handle it. Confidence, inclusion, and social acceptance of youth players appear to be tied to the healthy relationships that players have within their teams and family or peer groups.

4.3.8 Summary

Participants believe that Canadian Youth Soccer was trying to embrace the philosophy of inclusion, diversity, and equity, but there were still significant barriers to overcome. Many participants expressed that the grassroots levels of the game were inclusive, but the high-performance levels of youth soccer were elitist and exclusionary. Significant inequities exist across the country, which were primarily believed to be because of the birthplace effect, social-economic status, and a lack of tolerance for late-developing players.

Participants believe that smaller provinces and rural communities miss out on many key opportunities that bigger provinces and urban centers have for their players. Participants felt this was demonstrated by the overrepresentation of three provinces (Ontario, British Columbia, and Quebec) players on Youth National Teams or those selected for high-performance programs. The rising costs associated with playing talent development level soccer were believed to include only high socio-economic players and families. Also, coaches thought strict age group categories hindered talent development and were exclusionary to late developing players.

4.4 Priority Areas for Talent Identification and Talent Development

Participants identified several key considerations that the Canada Soccer system could focus on to increase the number of talented players it produces. One key theme from participants

was that Canada was producing more talented players but still not at an exceptional level. “I think we are producing a lot more players now than in the past; the players that we have on the pitch do well, but I believe we still do not produce a lot of exceptional players,” said one participant who has coached at the Canadian youth national team level. This statement would suggest that the system is doing better but is still not comparable to other top FIFA countries.

4.4.1 More Access to Grassroots Soccer Is Essential for Canadian Youth Soccer

The priority participants outlined was to continue expanding and improving the grassroots experience for children and youth players. The two keywords associated with those statements were keeping the game “inclusive” and “accessible” for all. A Technical Director at a community club in British Columbia stressed that this was key for more talents to flourish:

The grassroots [levels] should be the priority. [Canada Soccer] should ensure that many players in inclusive environments have the most fun possible. The more children and youth have fun, positive experiences in the game will lead to more talent and more talents flourishing.

The Technical Lead of a PSO also believed that it was critical to increase the player base at the bottom of the pyramid, and that would increase the number of players interested and available for high-performance programs:

We need to increase the base at the bottom. If we grow that base at the grassroots level and where players enter the game, we will improve those at the top of the pyramid. The detail within this idea is preventing drop-off. The more we provide safe, inclusive, accessible environments for these players to have fun in an enjoyable environment. It will translate into more talented players.

Expanding grassroots soccer increases the base of the talent development pathway. The more players at the base of the pyramid would in theory provide a greater pool of players who could transition into a talent development environment. Positive experiences at the grassroots level motivates children and youth players to want to continue with the game and possibly pursue a higher level of the sport.

4.4.2 Investing in Quality Coaching and Coach Education Helps All Youth Players

At the grassroots level, it was also deemed necessary to increase the number of quality coaches. “I think the biggest priority will be increasing the quality of our coaches,” said a community club Technical Director from Saskatchewan. They continued, saying, “When we invest in good quality people and good quality coaches, it only helps the players. So, whatever we can do to try and reduce barriers and get a higher qualified coach-to-player ratio.” Another performance coach in Nova Scotia noted that organizations should prioritize putting their best coaches at the younger levels. “We must put our best coaches at the younger levels, where we can influence the players’ development and soccer experience.” Coach education and continuous professional development at each age and stage translates into better learning experiences for all players. Better learning experiences for the players translates into longer player retention and more opportunities for them to reach their potential as athletes and people.

4.4.3 Stakeholders Need More Understanding of Youth Development

Participants agreed that it was likely that only a few youth soccer coaches in Canada were well informed about youth development principles despite this being identified as required knowledge when identifying and developing talent. A participant's explanation for this was that the youth soccer system was built on parent-volunteer coaches:

Most coaches are volunteers and parent coaches who learn a little each coaching cycle and do their best. The coaches with a solid understanding of youth development have completed some university education in physical education or education programs.

A participant with the Canadian Youth National Team program expressed that volunteer coaches at the grassroots level had a more difficult job than coaches with a youth national team:

In grassroots coaching, you are a sport scientist and travel manager; you are a head coach, assistant coach, video analyst, and hotel organizer; you are everything then you have your day job. You are just trying to help your community, so I do not blame the community for not being able to integrate this. If you are not reading or involved in research, you do your best with what you know.

There was concern from some participants that there were many coaches who "do not believe in [youth development] and have their philosophy and just refuse to be aware of anything else." One participant, who was a Director of Coach and Player Development and a U-Sport Head Coach from Atlantic Canada, expanded on this idea by suggesting that there was a sense of entitlement surrounding some coaches who were more concerned about their own ego and careers rather than their players. They expanded on their vision by offering:

There is a "big black jacket pandemic." You give a coach or paid staff an oversized black jacket and a clipboard. They walk around with a high level of entitlement and are more concerned about themselves, player identification, and results than communicating with players, providing feedback, and showing empathy for youth.

A Technical Director in New Brunswick felt that coach education had been focused primarily “on the sport, and it has not put enough value into stepping outside the sport. At a higher level, it is about the individuals that are involved and what their role is. How they can help to maximize [the players] sporting experience.” This participant agreed, however, that “it was hard to give people, especially volunteers, enough knowledge on youth development in a time effective manner.” Others felt that youth development was deeply rooted through coach education in Canada but questioned whether coaches are “held to philosophy and held accountable for applying it” because as some said, “as soon as winning comes to the forefront, the moral compass measurements are gone.”

Participants agreed that most coach training comes from their experience in the coach education streams. Some participants noted the new "Children and Youth Coaching License" was helpful because it touches on many vital considerations in youth development. A community club’s Technical Director from Quebec did, however, question the relevancy of these courses, emphasizing the need for expanding course content and improving assessment:

Have I learned how to deal with a player emotionally and with all the challenges?

Probably not. We passed everybody because they put a session down on paper and participated. These courses are prerequisites for our coaching and having coaches coach at specific age categories.

Another participant who has been involved as a course developer felt optimistic about what the courses provided to coaches of all experience levels:

[The courses] give more insight into the nuances of youth maturations at specific age groups and that Canada Soccer would start doing more in those spaces in the future. The

mandatory psychological, social, and physical development elements in the courses are helpful to all coaches.

This suggests that coach education should continue to expand beyond the technical and tactical components of the game and focus more on the psycho-social aspects of player development as it relates to talent identification and talent development.

4.4.4 Physical Literacy and Unstructured Play Are Essential Pieces of Development

A Director of Development in Ontario believed Canada Soccer needed “to shift the pendulum” back to coach education. They thought that:

we started to shift very much into the structure and knowledge of the game at a tactical level but to start competing on the world stage with some of the world’s best; I think that pendulum needs to start coming back a little bit where we start driving into the tiny details of supporting a player’s pathway, like how do you make their shot one-percent better or get them more physically literate

This same participant also reflected on their time as an academy coach when saying that physical literacy should be a priority for K-12 schools. The development of physical literacy in school-aged children would then take some responsibility away from clubs to develop movement skills in young players:

The education system needs to revisit its role in developing physical literacy in youth. Children learn the fundamentals of moving when they go to basketball, soccer, and hockey. Getting that support from education would allow some clubs to shift resources accordingly, which will help talent development.

They also referenced increasing unstructured play opportunities for players in their own free time:

Kids used to play in their free time to come into a training environment. That has now flipped; you are in a structured club environment to get to play. If you are not in a club environment, you are probably not playing with friends. There are too many distractions now. Unstructured play is essential to refine your skills.

A coach education facilitator at a professional youth academy also mentioned that unstructured play opportunities were necessary for players' growth:

If it was down to one piece of improving talent development, what I would love to see is more players taking accountability for their development without a coach or parent. The old-fashioned take a ball back to the field and perfect your craft.

Physical literacy provides athletes with the competency and motivation to continue playing throughout life. The longer the player remains in the talent development pathway the more likely they are to reach their potential. The inclusion of unstructured play could be considered vital as well for player development because it allows players to express themselves and experiment with their skills freely without pressure in game-like situations.

4.4.5 Systemic Supports Are Needed Across Pathways

Participants also stated that a priority should be improving the “structure” and creating “more opportunities” at the high-performance level of the development pyramid. “I think with more opportunities created at higher levels, there is going to be more drive to develop more talent,” said a participant. A participant with significant experience within professional youth

academies in Canada and abroad noted that it was a necessity to have more high-performance opportunities for players so that players had more drive to go beyond what was offered:

Soccer in Canada is not an outlet to get out of a specific situation like in other countries. You play it because you love it, enjoy it, or have a connection through yourself or your family. So, if those opportunities are not there, there is less to drive that individual beyond what is offered in a structured environment to pursue higher levels.

A participant from the Central region who was a professional academy coach also thought that opportunities were the most significant component in driving future talent development:

The more opportunities created at higher levels in Canada, the more drive will make more talent development, increasing the pool with better players by keeping their environment for much longer.

A national-level performance analyst connected developing more talent with increased professional opportunities for Canadians:

At the national level, we are doing a better job of not just identifying talent in Canada but identifying dual-citizens and late-blooming talent in college and tracking them professionally. So, we need more professional opportunities in the women's game [this means] getting the women's CPL off the ground.

Along with opportunities, participants felt that "adding resources" to the system would benefit all players. A Technical Director from Quebec suggested that Canada Soccer could help all players by "pouring a little more resources" into the system and "putting a few more boots on

the ground with scouting opportunities and development programs.” Adding resources to the system would include reducing the reliance on pay-to-play models for youth development programs. According to a participant in the Prairie region, the most likely means to do that would be to “find either government subsidies or corporate sponsorships to help offset costs away from the players and their families.” They said this would also reduce parents’ influence on coaches and clubs and help them make tough decisions without fear of repercussions.

4.4.6 Summary

The participants outlined several key priorities for Canadian Youth Soccer to improve talent identification and development processes. These included: 1) Improving access to grassroots soccer and quality talent development environments, 2) Greater system-wide knowledge of youth development principles, 3) encouraging physical literacy and unstructured play, and 4) Increasing system-wide support for youth soccer.

Coaches believed that increasing access to the game would only improve the number of players in the game. There was a belief that there was too few quality talent development environments in Canada that only catered to specific demographics of people. Players needed more experience playing and training consistently at a competitive level. Participants noted the importance of developing physical literacy in players and how providing unstructured play environments play increased competency and competence in foundational skills required for the sport. Finally, it was widely believed that a massive influx of system-wide sports targeted to those most in need to improve the talent development and talent identification opportunities for Canadian children and youth-aged players to meet their potential.

Chapter 5: Discussion

This study offers insights into the talent identification and development perspectives and experiences of youth soccer coaches in Canada. Findings not only build on existing literature on talent identification and development but also contribute to understanding different approaches that could help enhance the delivery of youth soccer. Since coaches offer a unique perspective about talent identification and talent development and have a deep understanding of the many structures that exist in Canadian youth soccer, this study intentionally used a geographically diverse sample of youth coaches from across Canada to hear their perspectives on talent identification and development processes used in the Canadian youth soccer system. The findings from this study offer unique understandings based on the talent identification and development experiences of Canadian youth soccer coaches. It also highlights considerations for improving talent identification and development that may intersect with other youth sports contexts.

Interview participants spoke to critical contextual factors and constraints that explain how talent identification and development processes are used in Canadian youth soccer. It was evident that the participants' responses were closely associated with the level of soccer they were currently coaching. For example, participants coaching at a national team or professional club's academy described the need for a higher standard in talent identification and development processes and for creating a more high-quality talent development environment with "like-minded" athletes. In contrast, those coaching at community clubs highlighted participation by all and implementing a fun and enjoyment philosophy. When reviewing the literature, it appeared that combining these perspectives represented the best way to develop children and youth athletes so that there were potentially more talented players in adulthood.

When reflecting on their own experiences with talent identification and development, the study's participants commented on the complexities of youth development and the impact that intertwined factors and barriers had on developing talented soccer players in Canada. Furthermore, participants voiced that despite stakeholders' best efforts, considerable inequities within the Canadian youth soccer talent development system prevent those potentially talented from reaching the top levels of soccer—a desire for improvements within the talent identification and development systems was also expressed.

Several prominent themes emerged from the responses. Notably, some of the participants' perspectives paralleled the current themes released in the FIFA report (FIFA, 2020), *Increasing Global Competitiveness: An analysis of talent development ecosystems and research* conducted by North et al. (2014) in their report to UEFA on principles to inform player development and coaching in European Football. In FIFA (2020) a set of actions in this report called *Give Every Talent A Chance* summarizes key talent identification and development considerations for FIFA member associations. Based on the responses in the research study, suggestions to improve talent identification and development were made in several areas. These include: (1) improved access to talent identification and talent development environments at every development stage and in every region of Canada, (2) moving talent identification and talent development away from pay-for-play and for-profit models, (3) prioritizing the psychosocial and social-emotional well-being of youth players at every development stage and competition level, (4) more significant exposure to age-appropriate talent development environments regardless of where the player resides, (5) create a clearly defined set of criteria about what constitutes a talented Canadian youth soccer player and how youth development principles the impact talent identification and development processes, and (6) invest in youth

soccer using an equity lens, prioritizing those who are most in need. These themes are elaborated in the subsequent sub-sections and are, in some ways, intertwined and dependent on each other.

North et al. (2014) also make several conclusions and recommendations about talent identification and talent development similar to what was found in this study. These would include: 1) having a clear and definable philosophy, culture, and definition of talent, 2) adopting a long-term approach to talent identification and talent development that is patient and makes appropriate use of selection methods, 3) attending to the holistic needs of players including those that are social-emotional, 4) use of appropriate learning environments that are team and player centered, and 5) that clear, coherent, and flexible development systems supported by a skilled and committed workforce.

5.1 Accessibility for All

The participants' responses showed that the birthplace effect significantly contributed to access to talent development pathways. The birthplace effect is a crucial equity consideration for any soccer governing body and its members because organizational decisions, like the location of centres of excellence or competitive leagues influence what players can participate in talent identification and talent development opportunities. The birthplace effect plays a decisive, and systematic role in developing Canadian youth soccer players' expertise (Finnegan, 2020). Differing development contexts and environmental or institutional processes can shape sporting landscapes and talent selections (Baker et al., 2009; Finnegan, 2020).

Across the interviews, diversity, equity, and inclusion were discussed in many ways. Participants felt that Canadian soccer stakeholders made significant efforts to make the sport as welcoming as possible for children and youth. Despite making significant progress, there was a belief that more work still needed to be done in these areas. Participants emphasized that there

were significant barriers to participation for children and youth across different contexts, especially when trying to enter or re-enter a talent development pathway. Implementing intentional structural changes at various levels of the talent identification and talent development pathways that meet local contexts could enhance the number of quality soccer players in Canada by broadening participation rates and retaining more players in the system.

Participants believed stakeholders were doing their best to make the sport as welcoming as possible to all races, cultures, and communities. Some believed that there were still significant issues of gender discrimination and inequities and in some parts of the game and that there were instances where the sport could be more inclusive to gender or sexually diverse people. It was also suggested throughout the responses that there appeared to be a lack of tolerance towards children and youth who would be considered late bloomers in the sport. This could be explained by a general lack of understanding about the relative age effect but is more likely a consequence of the win-at-all-cost, highly pressurized climate that persists throughout youth sports.

For the most part, the participants felt that soccer was accessible to Canadian children and youth at a grassroots level. A wide variety of introductory, recreational, or community club programming was available for Canadian children and youth in most Canadian communities. The quality of these programs could be debatable depending on what communities had available to them. However, if children or youth want to participate at a recreational level, they have plenty of options. The responses also recognized a significant lack of access to appropriate talent identification and talent development systems for aspiring talent, especially at high-performance levels of youth soccer. Talent development is not happening on an equitable basis for youth soccer players in Canada.

Many European elite soccer clubs have observed a lack of organizational proximity and communication between youth and professional environments (Relives et al., 2010; Sweeney et al., 2022). The lack of appropriate challenge and failure to provide appropriate levels of challenge for young players impacts talent identification and development (Till & Baker, 2020). There appeared to be significant variations in the standard of teams and leagues in Canada. This could be a result of player migration (Finnegan, 2020) where players transfer to more competitive clubs and weaken the teams that they were previously on, creating unbalanced leagues and competitions. Therefore, it was believed that players from stronger teams were not being challenged appropriately (Sweeney et al., 2022). The players left with teams were exposed to an environment that was not suited to their needs at that stage of talent development (Sweeney et al., 2022). The opportunities afforded to youth athletes in terms of standards and infrastructure differs between smaller and larger cities. Finnegan et al. (2016) noted that soccer players in Ireland developed in counties with an Emerging Talent program (the primary development mechanism within the Football Association of Ireland) had almost a 50% chance to gain selection than those without a center.

Canada's current soccer training structures automatically exclude most players from talent identification and development opportunities. According to the participants, there was a special connection between the number of players progressing from three provinces (Ontario, British Columbia, and Quebec) primarily due to more resources available to them and because of the presence of professional MLS clubs (Toronto FC, CF Montreal, and Vancouver Whitecaps). Participants also noted how these three professional clubs have academies that are predominantly for players local to the area and provide Canada Soccer with most players for their youth national

teams. In this case, children and youth in most provinces and territories miss out on talent development systems based on geography.

The lack of access is especially prominent on the women's side of the game due to the lack of a domestic professional league. The EXCELL program is a systematic development approach to develop youth national team athletes into senior national team players and part of the development pathway for Canada Soccer. A two-tiered EXCELL program brings together the most talented Under-15 to Under-18 players in to various regional excel centers. The regional programs filter players with potential to the *Super Centers*. The Super Centers provide female youth players with a centralized daily program to develop from under 14 to under 18 (Canada Soccer, n.d) exist only in British Columbia, Ontario, and Quebec (Canada Soccer, n.d). The location of these Super Centers also highlights exclusion based on some participants' concerns about aspiring talent having to move away from home before they are socio-emotionally ready. The lack of a fully professional league or NWSL club(s) with youth academies means that these players do not get consistently high-level game and training time.

This theme is connected to research involving population size and athlete development. According to the literature, higher population densities produce more extraordinary athletes, because increased participation, better competitive opportunities, and more resources are firmly entrenched in available literature (Baker, 2009; Phillips, n.d; Smith & Wier, 2020). The participants indicated a significant disparity in what was offered to youth players amongst provinces and urban and rural communities. It was also noted that decisions to centralize resources, such as facilities and programming to more densely populated areas make access to talent identification and talent development programs difficult for those residing away from

those areas. In some cases, the scarcity of facility availability or travel time/costs to training results in players missing out on necessary development hours.

There appeared to be a selection bias toward players from British Columbia, Ontario, and Quebec and specific talent programs within those provinces. This might also result from a lack of exposure to team scouts and national team coaches in other parts of the country. Some participants believed that their players did not have a chance of progressing through the player development pathway or reaching their playing potential unless they were in specific provinces. This could also link to player migrations in search of quality competition and, in turn, the deskilling of local leagues critical to talent identification and development. Inadequacies in resources may necessitate migration for a youth player to improve (Finnegan, 2020).

While there appeared to be a selection bias towards players from specific provinces, high-performance coaches' participating in the study argued that their role required them to select the best players with the most potential. That meant they were more inclined to select or provide opportunities to players competing consistently at a challenging level or from a club with a history of developing quality players. This may be a common-sense approach to talent selection. However, it indicates that a large portion of players is automatically excluded from the talent development system in Canada if high-performance level competitions only exist in certain areas. Most participants thought a player's pathway was predetermined based simply on where the player lived and not through an identification or structured development process. If a player lived in an area where high-level competition was inaccessible, they would be excluded from the talent identification and talent development process without an appropriate mechanism in place to be able to participate regularly at a higher level and further develop. Considering that a player

could be a product of their environment, there is likely many instances of players from smaller provinces and smaller communities that miss important opportunities.

One participant also referenced that Canadian youth soccer needed to be tolerant of players of the relative age effect. Players with advanced biological maturity generally perform better than less advanced players (Finnegan, 2020), which can lead to the systematic exclusion of later-maturing players within team sports. These older players' advanced physical, cognitive, and social development can increase the propensity for older youth populations to be chosen for representative squads and teams (Finnegan, 2020). Focusing on short-term success over longer-term development in clubs at all levels can lead to a selection bias towards those players born earlier in the year. Thus, creating unfair advantages within a development system, as these advantages are perpetuated throughout the critical developmental stages of a youth athlete (Finnegan, 2020). It was also routinely noted throughout the responses that age bands lacked the flexibility to bring players up to an older age-band when they needed a challenge or alternatively held back with a younger age-band when they needed. It was better suited for the player to receive more time to refine their skills, physically develop, or integrate socially with their peers. One participant also noted that, in Sweden, programming was created to accommodate youth players with growth and maturation differences from their peers so that they could be included in a more developmentally appropriate talent development environment.

Existing structures in Canada do not provide enough entry and re-entry points into high-performance, talent identification opportunities, talent development, or professional environments nationwide. In comparison, participants noted that in European countries such as England or Germany, a player could be released from a professional academy and have numerous other similar opportunities available to them within a proximity to where they resided.

Participants emphasized the need for more consistent opportunities, like those described in England or Germany, for potentially talented youth soccer players nationwide in Canada that mirrored those found.

5.2 Talent Development Should Not Be Driven by Pay-For-Play or Profit Models

Participants reported that the pay-for-play model used by most youth soccer clubs and private training academies were the most significant exclusionary factor impacting talent identification and development. The underlying issue appears to be the tremendous financial incentive stakeholders of North American youth sports and private clubs/academies have within what has become a 15-billion-dollar-a-year industry (Pandya, 2021; TD Ameritrade, 2016). According to a TD Ameritrade survey (2016), 63% of parents will pay \$1200 to \$6000 per year for their children to partake in sports, with nearly one in five paying more than \$12,000 yearly (Pandya, 2021). Furthermore, according to the Aspen Institute (2019), whereas 43% of children in homes earning more than \$100,000 were able to play sports, only 22% of children in homes with incomes less than \$25,000 participated in organized sports (Pandya, 2021). This was reinforced by the responses, which indicated that registration fees, travel costs (to and from training and competition), equipment, and facility usage costs significantly impacted Canada's talent identification and development processes. This was more impactful in provinces that needed to travel regularly to find an appropriate or challenging level of competition for games.

Socio-economic status is well recognized to significantly impact sport participation (Berger 2008; Breuer, 2011; Humphrey & Ruseski, 2006). Socioeconomic status also disproportionately affects ethnic and racial groups, reducing the potential pool of players (Holt et al., 2018; Pandya, 2021). Families with high socio-economic status can provide their children with increased development opportunities and more hours dedicated to their training (Andrew et

al., 2022). It also provides them with more significant opportunities for exposure to coaches, recruiters, and talent selectors than those who cannot financially afford participation. Children and youth from higher socio-economic backgrounds have also been shown to play more organized sports, train more (Jayanthi, 2018), and spend more money on them to specialize in a sport (Kuhn et al., 2021). With Canada being a culturally diverse country and the literature suggesting a connection between socio-economic status and sport participation, there is likely a large population of newcomers who are unable to participate in organized youth soccer or do not know how to get involved in the game.

Participants also raised concerns about the sustainability of current club models where parents and caregivers have so much power over how clubs operate. It was identified that clubs pay their operating costs through registration fees and sponsorships. Some participants indicated that community clubs and private academies were dependent on registrations fees to operate. Due to this, the clubs and academies were more accommodating to parents' and caregivers' demands because they were afraid that they would lose their children to other clubs.

Further questions arose from participants about the influx of private academies promising recruiting opportunities and advancing training opportunities for children and youth. Not only are participation costs high and exclusive to players who can afford it, but there are questions about whether these private enterprises are acting in the player's best interests or doing what helps the academy's earnings. These ties into concerns from participants that the club's emphasis was placed on short-term success over long-term development. Short-term successes were vital to keeping players registered within their programs, and the registration fees from those players were critical for clubs' financial viability.

5.3 Programs Need to Prioritize Social-Emotional Well-Being

Many interviewees expressed a concern about the role of parents and caregivers in children and youth sports. Parents and coaches can put unnecessary pressure on children and youth and create conflict with other parents and coaches. This could in turn affect the social-emotional well-being of the players or impact the selection decisions made by coaches or talent selectors. In various conversations, participants reflected on numerous lived experiences with board members, coaches, and parents that had significantly impacted the sports experience of children and youth players. A challenge facing youth sports is how adults run programming, placing adult-centric competition and training models on children and youth not physically or psychosocially ready for such pressures (Bergeron, 2017). The win-at-all-cost nature of some youth sports competitions causes overwhelming pressures and demands on children from adults seeking immediate results. Despite being abundantly clear that the single biggest motivator for children and youth to participate in sports and physical activity participation is fun, pleasure, and enjoyment (e.g., Cairney et al., 2019; Ramer et al., 2021; Visek et al., 2014). This study's participants and the literature (e.g., Bergeron, 2017) recognized that youth athletes experience many challenges while participating in sport. This would include time-consuming practice, excessive demands for competition and practice, and personal schedules (Bergeron, 2017). The modern-day lifestyles of youth also require a better balance between school, sports, extracurriculars, family, and social life (Bergeron, 2017) and increasingly full or part-time jobs.

Participants in the study felt strongly that the combinations of pressures and expectations too early influenced performance, development, and player retention directly at every level. They made a strong connection between a holistic, player-centred talent development environment and youth player development and performance. Youth sports programs have long been considered

essential to psychosocial and social-emotional development by providing opportunities to learn essential life skills such as cooperation, discipline, leadership, and self-control (Fraser-Thomas & Côté, 2006). Talent identification and talent development pathways must be administered and monitored carefully to ensure the health and well-being of youth (Lloyd et al., 2015b).

Talent identification and talent development pathways across countries are relatively homogenous, according to Finnegan (2020), with soccer development practices tending to focus on players' physical, technical, and tactical development while neglecting psychosocial and psychological components. However, sports experiences often foster citizenship, social success, positive relationships, leadership skills, and a sense of initiative in youth (Fraser-Thomas & Côté, 2006). Sport experiences also have been positively correlated with adult career achievement (Fraser-Thomas & Côté, 2006). The participants often referred to the four-corner model used by Canada Soccer as a guide for appropriate player development. There is a social-emotional component built into the four-corner model. However, according to Vaillancourt (2018), the social-emotional piece is sometimes neglected by coaches because of a narrow focus merely on the technical and tactical pieces of player development. Vaillancourt (2018) links social-emotional well-being with increased player participation and retention and enhances athlete performance. The participants also encouraged this link, adamant that keeping more players participating longer would help increase the number of talented players identified and developed in Canada.

Social-emotional well-being has five components that are critical for all aspects of life: self-awareness (i.e., recognizing emotions), self-management (i.e., regulating emotions and behaviours), social awareness (i.e., perspective taking, empathy), relationship skills (i.e., healthy relationships), resilience (e.g., confidence optimistic attitude, coping with setbacks, coping with

pressure), and responsible decision making (i.e., making good choices across a variety of different situations) (Mills et al., 2012; Taylor et al., 2017; Vaillancourt, 2018; Weisberg; et al. 2015). Participants in this study frequently identified these same character traits when defining talent in the context of a youth soccer player and what they believed were determining factors for future success.

The participants highlighted how various stakeholders (e.g., coaches, talent selectors, parents and caregivers, administrators, athletes, etc.) fail to address social-emotional well-being. It was identified that many youth coaches do not have a complete understanding of youth development and age-specific considerations for children and youth. This is a consequence of having to place coaches who are parents and volunteers. Many of these coaches have little education, understanding, or awareness of child and youth development and could simply model the coaching behaviours they received when they were players themselves. While it was stated by participants that additional mandatory coach licensing (i.e., Youth Coaching license) has improved coaching these coach licences only provide a snapshot of what should be known by coaches in child and youth development practice and principles.

Vaillancourt (2018) provided evidence of how social-emotional competence is associated with positive health and well-being, education and learning, and increased sports performance. For example, they emphasized how positive relationships play a significant role in children and youth, because belonging is a basic human need and a fundamental motivator for human behaviour. This was reiterated by Martindale et al. (2005), who stated that motivation was paramount to successful development in any pursuit. Without motivation, they said there is no drive to learn and no desire to develop or succeed (Martindale et al., 2005). Children and youth who do not belong or feel like they do not belong amongst their peers are reluctant to try, take a

risk, or participate (Vaillancourt, 2018). A lack of belonging is associated with academic difficulties, participation avoidance, absenteeism, stress-related illness, low self-esteem, depression, and social anxiety (McDougall & Vaillancourt, 2015; Vaillancourt, 2018). It is also strongly linked to mental health and resilience (McDougall & Vaillancourt, 2015; Vaillancourt, 2013, 2015, 2016, 2017) and nervousness due to excessive criticism and pressure from adults (Witt & Dangi, 2018). While Vaillancourt (2018) references these points within a school and social context, these issues are also directly associated with individual and team sport performance and development. Sports literature also referenced connecting player retention, dropout, and performance (Edwards et al., 2006; Temple & Crane, 2013; Witt & Dangi, 2018) to similar components of social-emotional well-being.

Temple and Crane (2013) reviewed why children and youth quit organized soccer. This review identified lacking skill competency, fulfilment of basic psychological needs, poor relationships with coaches and teammates, and a lack of enjoyment and opportunities to play (Temple & Crane, 2013; Vaillancourt, 2018) as reasons why children and youth quit soccer. These same points were also identified by Witt and Dangi (2018). A lack of positive experiences associated with sports can explain why youth leave talent development environments. Positive movement experiences have been vital in sustaining children's participation (Ramer et al., 2021; Visek et al., 2015) in sports and physical activity. Conversely, negative movement experiences can lead children to become disaffected from the sport, with the most cited reason among youth dropping out is that it is not fun (Visek et al., 2015). Participants in Temple and Crane (2013) and other studies recognized the importance of fun, enjoyable, and positive learning/training environments on player retention and performance.

Recognizing and alleviating the challenges and complexities of parental and caregiver involvement in youth sports could also improve psychosocial and social-emotional outcomes in youth players. Research indicates that the quality of parental interactions with other individuals impacts their and other children's sports experience (Harwood et al., n.d). Numerous examples were provided in the study's responses relating to how parents and caregivers influence talent identification and development (Harwood et al., n.d). Most of these examples were related to how parents can bring an adult-centred lens to a youth-centric environment. According to Fraser-Thomas and Côté (2006), children who perceive more positive interactions, support, and encouragement and less pressure from parents and coaches experience more sport enjoyment, more preference for challenge, and display more intrinsic motivation than other children.

One way to improve this is for coaches and parents/caregivers to focus on their relationships with the players and others involved in the game, such as other coaches, club representatives, or those involved in competing programs. Vaillancourt (2018) made a solid connection to how resilient children are about to bond with competent adults. In education, student achievement is linked to positive teacher-student relationships where teachers show that they care about a student. Students in positive relationships with their peers and adults are more motivated to learn, try harder, and behave better. A positive teacher-student relationship is no different from a positive coach-athlete relationship. Vaillancourt (2018) also noted how coaches needed to be mindful of peer relationships, what players are included and excluded from peer groups within the team, and how teams should share responsibility for the successes and failures of everybody.

Positive learning environments promote social-emotional development in children and youth athletes. A positive learning or playing environment includes a respect for diversity,

equity, and social justice, a sense of connectedness amongst team members, a pattern of positive relationships between team, staff, and club members, and positive steps to value the mental health outcomes of students and athletes. Participants supported these ideas by routinely referencing ideas like having fun or enjoying the experience or process. Creating an optimal environment for learning and playing results in the players meeting better achievement and performance standards. This is mainly contingent on the club culture and atmosphere created around clubs, academies, and teams. This has been roundly accepted by numerous researchers, such as Taylor et al. (2017), Vaillancourt (2018), and Weisberg et al. (2015). Participants' responses were consistent with Mills et al. (2012) and Williams and Reilly (2000), who thought talent development was conditional on the athlete's environment. Winning should not come at the expense of children's and youth's development. While those in high-performance environments saw the need to be more demanding and standards-based, the study's participants did not feel it was necessary to sacrifice the players' experience for talent identification or talent development.

Those involved with the high-performance programs appeared to have more control of the learning environment and could quickly implement a policy that targeted player development over winning. In contrast, the responses from participants in the community club area indicated that they had less control over their environment because they depended on registration fees to operate. To prevent players from transferring to other clubs, coaches and administrators would cater to parents' demands and pressures so that they could maintain their jobs. Those involved in talent identification and development should want to create and place players in environments where they will most succeed. They should not have as many players around in those environments for as long as possible; a decision must be made about what is best for the player.

Many participants supported having more professional development and parental engagements. Articulating accurate and evidence-based information to parents/caregivers will help support a common understanding of talent identification and talent development processes and practices. Many participants suggested that volunteer parent coaches were still coaching players, even at more established clubs. With the value coaches have towards player and team development, a lack of well-qualified, experienced coaches would likely diminish talent identification and development processes. Finnegan (2020) described an Irish system characterized by poor communication and a lack of role clarity between coaches and parents. They also noted that a common concern of parents was that soccer academies lacked regular comprehensive communication from coaches. Balanced parental involvement and regular coherent coach, club board member/executive professional development, and parent education could help mitigate some of these problems and help improve players' playing environments (Witt & Dangi, 2018). It could also eliminate parents' interference with coaching practices by providing inappropriate and contradictory coaching advice (Finnegan, 2020).

5.4 Talent Development Environments Should Be Developmentally Appropriate

It has been established in multiple research studies that the talent identification and talent development environment of an athlete affects their player development (Finnegan, 2020; Henriksen et al., 2010; Martindale et al., 2010). The talent identification and talent development environment should challenge athletic pursuits while providing appropriate social support (Finnegan, 2020). The environmental and sociological conditions experienced by an elite youth player are important determinants of success (Williams & Reilly, 2000).

There are primary characteristics of effective talent development environments identified by various researchers. These characteristics included long-term aims and methods, wide-ranging

coherent messages and support, emphasis on appropriate long-term development standards and not an early success, and holistic and systematic development (Finnegan, 2020). Finnegan (2020) also identified stakeholder coherence and involvement as important features. Another critical feature was an organizational vision, identity, and purpose that is strategic and systematically implemented (Finnegan, 2020; Martindale et al., 2005) and a coherent organizational structure and governance (Finnegan, 2020; Henriksen et al., 2010; Martindale et al., 2005). Finnegan (2020) also identified eight features of successful development environments that include training groups with supportive relationships, proximal role models, support of sports goals by the wider environment, support for the development of psychosocial skills, diversification of training, focus on long-term development, organizational culture, and integration of efforts.

Researchers like Finnegan (2020) and Martindale et al. (2007) outline fundamental principles of effective talent identification and talent development environments. It was stated that effective talent development environments were distinguished by a robust organizational structure throughout the pathway (Henriksen et al., 2010). It was also evident from the interviews that constraints in talent identification and development resulted from a lack of collaboration between governing bodies, professional academies, local clubs, and private academies. This was exemplified by what appeared to be competition for players amongst stakeholders that resulted in various programming, competition levels, and identification opportunities offered to players. A shared understanding of player development in Canada would result in clubs working closely with professional academies, private academies, and National Team programs to ensure players reach their potential and transition successfully to talent development environments. The use of short-term competitive success or finances as a marker of the effectiveness of development clubs appears to be failing to produce international and

professional players because very few Canadian youth aged players compete in talent development environments that provide ample opportunity for reaching their potential. Participants were critical of current youth soccer structures in Canada, and their responses indicated no clear and consistent picture for youth athletes to move through the development pathway. Without further changes to the structure of youth soccer, problems will continue in talent identification and development, as well as the quality of sports experiences of children and youth players.

Canada Soccer has a history of different groups, leagues, and provinces with differing ideas of developing players. Sweeney et al. (2022) stated that alignment in stakeholder perceptions was crucial in player development (Sweeney et al., 2022). In essence, a coherent operating system is a cohesive philosophy between stakeholders characterized by clearly defined core values, expectations, and behaviour standards that represent optimal developmental conditions for young athletes (Mills et al., 2014; Sweeney et al., 2022). Stakeholder coherence can be seen horizontally, where athletes experience complimentary coaching and adaptive support based on changing demands (Sweeney et al., 2022). Coherence can also be seen vertically, where multiple stages of the talent identification and talent development pathway build chronologically from previous involvement toward long-term aims (Sweeney et al., 2022).

Sweeney et al. (2022) also found that in the talent development environments of soccer academies in Sweden, high-quality environments were characterized by well-established relationships between key stakeholders. In low-quality environments, academy players experienced deficiencies in their support network with a lack of established relationships between coaches and parents.

Participants did mention how the creation of the national club licensing program and advancements in coach development programs has helped improve the standards of Canadian youth soccer clubs. However, there remains a lack of high-quality talent identification and talent development environments for aspiring talent. This was especially evident for smaller provinces and rural areas. Participants primarily recognized Canada's three MLS academies as the only three talent identification and talent development environments that progressed players to professional environments or youth national teams.

If talent identification and development environments are intended to be inclusive, it is generally accepted that players will have different needs at different stages. The research community believes children and youth should be careful not to specialize too early in their sport. The participants agreed upon this and encouraged a delay in talent identification into a player's late adolescence. It appeared that clubs and academies started separating players by the under 12 age group, but some noted that they had seen this starting as early as under 9. There was a consensus amongst participants that talent development environments would move away from policies promoting early selection and deemphasize winning at early stages so that players had a greater chance of developing.

According to Andrew et al. (2022), a significant factor in athlete development is the number of sporting activities athletes engage in across their formative years. Skilled youth soccer players accumulate more soccer-specific activities across their youth when compared to less-skilled players, particularly in early adolescence (Andrew et al., 2022). A lack of formal game time severely impacts soccer players' development (Andrew et al., 2022). Participants in Andrew et al. (2022) indicated that the structure, size, and scope of organized developmentally appropriate competitions, as well as the consistent game time effect in competitive leagues,

drastically affected the progression of youth players in smaller CONCACAF countries. The participants shared this sentiment in this study about the lack of fair and consistent competition for Canadian youth players. Some examples cited were the lack of a professional women's league and high-level competition only being found in the three most populous provinces (e.g., Ontario, Quebec, and British Columbia). In some respects, it appeared that Canada is a large sporting country operating a talent pathway in a soccer context comparable to one from a smaller sporting country. Participants firmly believed they needed consistent competitive experiences at a high level to develop their talented players correctly.

It has been suggested that professional clubs offer the best environment for potentially talented players (Ness, 2020). Outside Canada's three MLS academies, attempts to create standards-based leagues in Canada seem to use a pay-for-play model which automatically excludes a significant number of players and potentially decreases the level of play. Community clubs attempting to market themselves as high-performance or elite lack the resources to provide a high-performance training and competitive training and playing experiences for aspiring talent. Quality youth academies and the introduction of high-performance youth leagues seem fundamental in educating professional-level soccer players (Grossman & Lames, 2015). Players are identified and recruited early into training academies, leading to earlier and greater exposure to technical, tactical, and physical soccer practice (Andrew et al., 2022).

Using Germany as a comparison, a well-run talent development program seemed to help to develop young soccer players (Grossman and Lames, 2015; Pouyandekia and Ghafari, 2021). Implementing mandatory youth academies for every first and second-division Bundesliga club and creating a Under -17 Bundesliga was a positive development for increasing the number of well-educated soccer players and helping identify talented players who could move to the highest

levels of soccer. The introduction of Under-17 and Under-19 professional academy leagues lifted the competition between the best players and boosted non-youth academy players. While soccer may be a different cultural context in Germany than it is in Canada (e.g., hockey in Canada would have the same cultural significance as soccer would in Germany), there seems to be benefits to help less developed players and players whose distance to a youth academy is too far to develop better skills and present themselves to youth academy scouts in regional competitions.

Appropriate individualized youth athlete identification and development strategies are challenging because youth athletes are changing due to physical growth and biological maturation (Bergeron, 2017). This makes it difficult to accurately assess across the multiple domains and varying stages of athletic and sport advancement (Engebretsen et al., 2010; Malina et al., 2004). Martindale et al. (2005) emphasized providing youth with flexible systems for performance and physical development variations.

Flexibility within development systems or policy was something that participants consistently mentioned in the study. They recognized that talent identification and talent development is often a non-linear pathway to the highest levels of any sport and that having the ability to move players freely up and down the talent development pyramid is player-centred and inclusive. When one door shuts for a player or progress is impeded, another avenue to progress should exist. When the player's experience is not going well at a stage, there should be a choice provided to the player to either gain further experience elsewhere, be it at another competition level or another age band category or continue along the same development pathway that they are currently on. Martindale et al. (2005) stressed that talent develops and changes in adaptive and maladaptive ways depending on certain innate and environmental factors. Such a dynamic process implies that systems must be flexible enough to

allow such variations. A good club structure provides various age groups with a wide range of opportunities for coaches to cater to differing standards (Martindale et al., 2005). This would allow for movement in and out of the system without losing opportunities. If placing players on competitive teams were deemphasized until older age groups, it would open more opportunities for more extended time periods. This would allow for talent identification and talent selection to take place during more definitive periods of a player's development.

5.5 Talent Identification and Development Processes Need to Be Clearly Defined

The actions and interactions of clubs, governing bodies, and professional and private academies significantly impact youth soccer players' talent identification, development practices, and experiences. The participants indicated that a clear definition of talent, talent identification, and talent development was not present among stakeholders, nor was a general understanding of youth development principles by stakeholders. Clearly defining the processes would not only help clubs create a quality talent development environment or implement inclusionary player development practices that are player-centered and represent the non-linear aspect of development.

North (2014) studied player development systems in seven European countries with the most successful soccer leagues by interviewing 41 of Europe's leading national and club player development experts in Belgium, England, France, Germany, Italy, the Netherlands, and Spain. The research adapted and contextualised a schematic of principles of player development in European soccer (North et al., 2014). It highlighted many similarities in the principles and components underpinning effective player talent identification and talent development. The experts noted the importance of having a clear philosophy and plan—for example, developing player characteristics that would give them a better chance of eventual success. Throughout the

interviews, mixed views around the definition of talent, the purpose of talent identification, and the best practices of talent development emerged. A key aspect of talent identification is how coaches, scouts, and selectors align their talent identification beliefs with the organization's philosophy. It is clear from the available literature that the definitions of talent lack a common consensus. Likewise, when participants of this study were asked to define talent, there appeared to be connections to many common player traits. For example, items such as sport-specific qualities (e.g., technical skills and tactical awareness) were commonly stated. There were also psychological traits, such as decision-making and work ethic, and physical components such as speed and quickness. Talent identification appears to depend on the club's player development philosophy. Clubs sometimes look for different attributes for what they want in players; this could mean looking for youth players who could get results for the club now and not ones they would develop for the future.

One of the main ideas identified throughout the interviews was that talent identification does lack predictive validity in youth. To make more accurate decisions about talent identification and selection, decision-makers need to establish consistent language, characteristics, or indicators that relate to potential and future success within a soccer development system. It has been shown that different clubs can look for different qualities and skills (Saether, 2014), have different selection criteria (Bergkamp et al., 2021) and use a variety of performance predictors (Williams & Reilly, 2000). With many different structures and intentions across Canadian youth soccer, it is rational to believe that the terminology of talent can be significantly different amongst coaches, scouts, recruiters, and clubs across Canada. That would include clubs' methodologies to select teams or intake players into their programs.

Participants urge that clubs should have transparent and consistent performance and selection models that value physical literacy and long-term growth over immediate results.

Participants seemed to prefer a ‘layered’ approach to selections and modifications, ensuring that multiple qualified staff see players over extended periods and in different playing environments before making selections. It was also noteworthy that one participant in a professional academy described how their club trains their scouts to recognize each of the eighty-plus selection indicators they look for in players. These judgements and criteria for weighing performance attribute impact players’ opportunities to be identified and progress through the talent identification and talent development pathways. This training would be helpful to professional learning for stakeholders throughout the system.

Throughout the interviews, there was a common perspective that the role of coaches and parents within talent identification and talent development could be enhanced by developing a better understanding of youth development principles. Such understanding of youth development would also help coaches and practitioners understand how their perspectives about talent affect talent identification and talent development (Till & Baker, 2020). Coach education and professional development is increasingly difficult with the number of parent and volunteer coaches who are responsible for children and youth teams at various levels of the talent development pathway (Till & Baker, 2020). However, the scarcity of resources often limits how clubs and programs can offer their players, coaches, and volunteers (North et al., 2014). The participants responses seemed to indicate that the birthplace effect had a significant impact on what players were provided with talent identification and talent development opportunities. Many believed that this was evident by the players and programs that were represented on the

roster selection for the Canadian Youth National Teams. This may indicate that a coordinated and comprehensive talent identification structure is lacking at various levels of the pathway.

Furthermore, if coaches, talent selectors, and practitioners often provide subjective evaluations of potential and performance it would be useful for Canada Soccer to adopt a consistent approach to trials and player assessments. North et al., 2014 recognized that most successful nations in senior and youth soccer competitions (e.g., Spain, the Netherlands, Germany, etc.) not only adopted a comprehensive approach to player development but ensured that the application of such was consistent. For example, if a country had a clear view of the player characteristics it wanted to produce, identification and development activities were geared towards encouraging the development of these characteristics (North, 2014). Canada Soccer could develop multidisciplinary objective and subjective talent identification tools that could be used to monitor athlete progression or performance. Such tools would help create a transparent talent identification model across the country. A clear philosophy of player characteristics and skills for all levels of the talent identification and talent development pathway and a system that records, monitors, and evaluates players regularly would be critical to informing decisions, especially if there are few sports available for high performance talent development environments for children and youth aged players in Canada. Such tools would also improve parent and volunteer coaches understanding of youth development principles and help them make more effective decisions at the entry points of the talent identification or talent development pathways.

Like the participants' perspectives, the need for parental education and regular coach-parent communication within soccer academies have been highlighted (Harwood et al., 2010; Clarke & Harwood, 2014; Newport et al., 2020). The coaches in Sweeney et al. (2022) claimed

they have regular communication with parents, and most parents were critical of the coach's communication. Parents felt that they received inadequate communication and were underappreciated in their role as parents by coaches (Harwood et al., 2010; Clarke & Harwood, 2014)

Making informed decisions about children and youth players' current performance and future potential also requires understanding biological (Eisenmann et al., 2020; Malina, 1994; Romann et al., 2017) and psycho-social (Harwood et al., 2019; Gearity & Murray, 2011) development. Participants believed there was more learning in these areas with recent curricular updates to mandatory coaching license programs. However, there still could be further learning in these areas, especially where social-emotional and psycho-social components of player development are deemed to be crucial. Education and awareness could also help implement policies to reduce the relative age effect by using methods such as bio-banding or giving coaches more flexibility to move up or down and age-band that suits their playing ability. As noted by the participants, bio-banding and age-band flexibility would be helpful for youth players in every province but implementation of such ideas needed both more buy-in from parents and a systematic shift in youth soccer philosophy towards development and away from winning. Grouping strategies should consider all areas of the four-corner approach. These types of strategies can work alongside competition structures.

5.6 Building System Capacity and Minimize Inequities

The talent identification and development systems' more critical resources are athlete-related support (Till & Baker, 2020). While some systems have substantial resources to develop, deliver, and support their programs (Till & Baker, 2020), it is not prevalent in all Canadian provinces. In Canada, it appears that Ontario, British Columbia, and Quebec have more

resources available to their youth players than the other provinces and territories. There also appears to be greater inequities present between urban and rural soccer within the provinces.

The availability of well-equipped facilities is needed to promote performance within the sports development system (Williams & Reilly, 2000), yet sports infrastructure varies across Canada. These inequities were seen as an exclusionary factor for players wishing to participate in talent development environments that would increase the probability of the player reaching their potential. Effective systems will require support to ensure athletes have the real opportunity to participate and excel (Coutinho et al., 2016; North 2014; Martindale et al., 2005; Martindale et al., 2014, Till & Baker, 2020). Participants identified a trend that Ontario, Quebec, and British Columbia-born players predominately made up the rosters of youth national teams or gained more high-performance/professional opportunities. It was also suggested by participants that resources were centralized to major urban centers and provinces with the most youth soccer players (e.g., Ontario, British Columbia, and Quebec) and that youth soccer players outside these major centers had little support and resources dedicated to talent identification and talent development.

A common theme from participants was the resources needed to support the talent development system. The most crucial resources identified were athlete-related support (e.g., housing, education, cost of living expenses, and government assistance programs for high-performance athletes) and training-related resources (e.g., access to training centers, development/competition-related travel, and access to quality coaching). Since there is a lack of professional development structures, community clubs and private academies (i.e., private entrepreneurship) are left to do their best for the players. This causes significant variability among systems and amongst regions and provinces. One participant from Atlantic Canada noted

that it was common practise for clubs outside major centers where they pick a point whereby, they could best deliver a program with the resources available. This participant believed that the more elaborate the program, the higher the associated costs. The higher the cost of the program, the more those costs are placed back on the players and their families through registration fees. The participants of this study indicated that the resources needed to support elite player development or unlock potential are simply unavailable to most youth players in Canada. From the responses it is apparent that players must seek out opportunities on their own accord, potentially moving to another province or another country to chase their dreams of becoming a professional soccer player.

National Associations have traditionally taken the lead role in policy development and implementation in some top FIFA nations. At the same time, it appears in Canada that provinces have much autonomy in their decision-making and implementation policy. An increase in investment and emphasis on youth development has come from National Associations through incentives to increase the opportunities for domestically developed players to excel in place of clubs trying to produce the most skilled players (Andrew et al., 2022). Top FIFA nations, such as Germany, England, and France, demonstrated the importance of investing in youth development. These countries initiated fundamental changes to their talent development systems to address failures at the international level (Pouyandelkia & Memari, 2020). The consistent focal point for these countries' changes and success was devoting large amounts of resources to identifying and developing homegrown talent. (Andrew et al, 2022; Pouyandelkia & Memari, 2020).

Each country has seen a significant impact from investments in talent identification and talent development in both the men's and women's games. For example, the German federation

launched a performance center and financial support to associations through a sustainability program (Pouyandekia & Ghafari, 2021; Pouyandekia & Memari, 2020). French Football Association (FFF) mandates all first-level professional teams to run programs for youth academies (Pouyandekia & Memari, 2020). The FFF also created two youth educational programs for 6 to 11-year-olds and a youth national identification program for the youth national teams aged 16 to 18 in France (Pouyandekia & Memari, 2020). The FFF also created and operated the Clairefontaine academy, which is widely considered the finest soccer development academy in the world (Pouyandekia & Memari, 2020).

In England, the English Football Association (EFA) instituted the charter of quality and the development of the Elite Player Performance Plan (EPPP). To address barriers to success with young players, the EFA and representatives of the Football League and the Premier League clubs made significant investments in the construction and development of facilities and the recruitment and development of staff for young players (Kelly et al., 2022; Pouyandekia & Memari, 2020). This cooperation was vital to promoting a new youth development system and the modernization of the youth academy system (North et al., 2014; Pouyandekia & Ghafari, 2021). This might have contributed to England's Under 19 (Boys) European Championship, simultaneous Under 17 and 20 (Boys) World Cups, and the 2022 European Women's Championship. Data from 2008 indicated that English category one soccer academies invest between 2.3 and 4.9 million pounds per annum (Larkin & Reeves, 2008), while UK sport reported spending approximately 100 million pounds per annum on identifying and developing sporting talent (UK Sport, 2015; Till & Baker, 2020).

The EFA has strikingly different youth programming compared to Canada Soccer. The EFA incorporated the EPPP into the English academy system, that intended to offer a more

holistic approach to supporting player development that moved away from traditional approaches that were not working (Kelly & Williams, 2020). The EPPP aimed to increase the number and quality of homegrown players participating in the English professional leagues (Seward et al., 2020).

Academy philosophies are crucial in England youth soccer's talent identification and development processes, as their implementation significantly impacts individual recruitment, progression, and subsequent achievement (Kelly & Williams, 2020). The EPPP policy provides recommendations for the multifaceted components of player development with adherence to these standards assessed to rank each academy in return for financial investment (Williams & Reilly, 2000). Although the EPPP facilitates context and environmental-specific approaches, these prescriptions are non-specific in their design and open to interpretation, thus allowing academies to adapt and adopt their best practice strategies. (Williams & Reilly, 2000).

The takeaways from these three FIFA nations were an investment, equity, and cooperation. In Germany, government is one of the critical pillars of its talent management program. The German government distributing income between all football clubs plays a vital role in this program (Grossman & Lames, 2015; Pouyandekia & Ghafari, 2021). Cooperation with the government has built 32 football schools (Pouyandekia & Memari, 2020). Since youth training should be parallel to school studies, maintaining the balance between these plays a vital role in developing talented players. Canada has not invested on a broad enough scale to support the growth of its youth soccer players. Provincial and local autonomy seems to put provinces in a position where they look after their best interests instead of what is for the player. Participants' responses indicated wide inequities in how resources and opportunities were distributed across the country to children and youth soccer players. While decisions may be limited due to scarcity

in resources, the systems seem to greatly favour players in a few specific environments. As demonstrated through the literature, effective systems and targeted investing are crucial to successful talent identification and talent development. To improve the number of talented youth soccer players produced in Canada, cooperation between stakeholders and a massive investment in at all stakeholder levels may be required.

Chapter 6: Conclusion and Future Implications

6.1 Overview

The study's primary purpose was to investigate how talent identification and development processes are used in Canadian youth soccer. From this, the researcher explored two other pieces: (1) the complex challenges, factors, and constraints associated with talent identification and talent development processes and (2) the accessibility and inclusivity of talent identification and development processes within Canadian youth soccer. To achieve these objectives, the researcher used a qualitative methodology to gather coaches' perspectives across four predefined Canadian regions (Atlantic, Central, Prairie, and Western).

The results highlighted that what coaches view as talent depends on what level of youth soccer they are coaching. Definitions sometimes vary depending on what specific coaches, clubs, organizations, and philosophy is and how they want to play the game. Identification processes appear to be primarily subjective but depend on available resources. Coaches believe that the development process should be holistic and player-centred but must work within the structures they have been provided.

It also highlighted that there are several constraints on identification and development processes that are dependent on local context. Responses were related to the birthplace effect, relative age effect, lack of resources (e.g., centralization of facilities, competition, quality coaching, and number of players), pay-for-play models, and coach and parent influences.

Furthermore, talent development systems in youth soccer were seen as exclusionary because of significant inequities across Canada. This resulted from the birthplace effect, relative age, lack of quality talent development environments, and socio-economic status.

Lastly, talent identification and development are complex processes. There was a variety of themes expressed by the participants. Reducing inequities and providing more quality sports experiences were considered essential. It was suggested that resources be allocated more efficiently with an equity lens. There were thoughts of providing a clear definition of a talented soccer player and guidelines for selection criteria. Participants also felt that stakeholders needed more learning and understanding of youth development. Coaches also preferred more flexibility between age bands to help individualize development and mitigate the relative age effect.

Six takeaways are highlighted to enhance the talent identification and talent development processes in Canadian youth soccer:

- (1) Significant inequities exist within Canada's talent identification and development systems, creating significant exclusion for youth players. The participant's responses connected this theme to the birthplace effect, a lack of tolerance around relative age effects, and socioeconomic status.
- (2) Talent identification and development systems should not be driven by pay-for-play or profit-earning models. Affordability is a significant exclusionary factor for talent development and talent identification opportunities.
- (3) There is a clear need for more holistic and age-appropriate talent development environments across Canada.
- (4) Stakeholders at all levels need to prioritize the social and emotional well-being of child and youth-aged players.
- (5) There is not a clear and consistent understanding of talent, talent identification and development processes, and youth development among Canadian youth soccer stakeholders.

(6) Effective system-wide financial investments are required through an equity lens.

6.2 Practical Implications

Based on the findings, several implications for Canadian youth soccer policymakers exist regarding talent identification and development. First, it is beneficial for all stakeholders to have more high-quality soccer programs driven by a player-centred, holistic approach to development that is as close as possible to being cost-free for the player. Programs that invest in positive sporting experiences for youth-aged players retain more players for extended periods (Ramer et al., 2021; Visek et al, 2015; Witt & Dangi, 2018). If players are motivated, engaged, and enjoying their experience, they are likelier to continue in the game. With the non-linear, unpredictable nature of youth talent identification and development, it would appear logical to expand the talent pools for as long as possible and provide an environment that encourages players to remain in the game well past their youth age groups. This could be achieved by focusing on experience and the individualized nature of development, not competition results (Witt & Dangi, 2018).

It would also be practical to allow age bands and programs to be more fluid to accommodate constraints created by relative age. Study participants consistently referenced the need for coaches and programs to be more flexible in allowing players to move up or down age group categories to put players in the best situation for their individual growth. It would also be necessary to expand on stakeholders' knowledge and awareness of youth development and how it impacts selection decisions, talent development environments, and effective coaching pedagogy.

Second, Canada Soccer policymakers must acknowledge the significant inequities within talent identification and development pathways. General exclusion of potentially talented players

likely occurs across the country. There is influence by factors such as the birthplace effect, relative age effects, socio-economic status, and disparity of resources. Investing in long-term sustainable development opportunities for all players leads to the development of stronger players (Balliaux et al., 2000). Stimulating investments from an equity-based and efficiency lens would provide more opportunities for youth soccer players outside the major centers of Ontario, British Columbia, and Quebec.

The findings also emphasized that social-emotional health had in the development of athletes. Therefore, it is key for all parties involved in the talent identification and development process to be aware of the impact of their behaviours on all children and youth players. There is a need for more understanding and training around social emotional, and psychosocial skills, such as building positive relationships due to their connection to mental health, belonging, and player performance. It would also predicate the need for better parent and board member engagements to reduce conflict and increase understanding about youth development. Other than seeing a need for a more diversified set of professional learning and licensing for Coaches, it has implications for decision-makers regarding how decisions are made around talent identification and development. For example, clubs could reflect on how and when they make talent selections or implement talent development principles.

For players, the perspective provided by the participants indicates what qualities coaches, talent selectors, and practitioners look for when they select players at different levels. There is also some critical learning about the importance of the correct mindset and understanding how the development process is individualized. A valuable understanding of what makes a quality talent development environment exists amongst all participants. Understanding what constitutes a quality development setting could influence a player and their family's decision about where to

pursue their soccer, potentially putting them in a better situation to succeed or progress over the long term. Long-term sustainable development opportunities for all players lead to the development of stronger players (Balliaux et al., 2000). Stimulating investments from an equity-based lens would provide more opportunities.

6.3 Recommendations

6.3.1 Stakeholder Relationships and Engagements

A decentralized approach to managing youth sports has created a disjointed and inconsistent system that does not optimize the developmental benefits of sports (Bowers et al., 2010, 2011). Likewise, Canada Soccer's current talent identification and development system seems disjointed and lacks coherence. Clubs, coaches, players, and parents who consistently support what is expected of them, make the system a success for youth (Finnegan, 2020). The system's thinking should embrace and consistently support development, health, and well-being first. This recognizes that youth sports are impacted by multiple stakeholders (e.g., families, parents, teams, communities, etc.) and that soccer nations with successful talent identification and talent development processes, ensure that all critical stakeholders understand and buy into the identification and development systems (Finnegan, 2020; Andrew et al., 2021).

Developing a collaborative youth soccer culture requires a system based on synergy. In Canada, the key stakeholders are the provinces, professional clubs, community clubs, and private academies. A lack of coherence was apparent due to the diversity of programming offered throughout the country and the relationship issues expressed by participants between the clubs, academies, parents, and stakeholders at different levels of the game. All of these stakeholders must be engaged and afforded opportunities to create mutually beneficial relationships to work in unison to achieve the positives of youth development.

It would be beneficial for Canada Soccer to fully engage in designing and delivering their programs with stakeholders through diverse advisory boards and engage with other stakeholders at the coaches, parents, and community leaders' levels. A practical way to increase stakeholders' voices would include youth in advisory groups and decision-making bodies. Youth sports can sometimes be considered adult-centric, so the voice of youth would represent a clear set of perspectives from the stakeholder affected by policy decisions. Kuhn et al. (2020) also suggest that building relationships between academic and community partners that involve shared goals and complementary skills/expertise is paramount.

6.3.2 Addressing Inclusion and Inequities

Sports programs have become increasingly elitist (Fraser-Thomas & Côté, 2006). Developed soccer nations must ensure that all youth have the opportunity to engage in sports and develop their talent to its potential (Fraser-Thomas & Côté, 2006). Youth soccer players cannot benefit from a talent identification or development system if they cannot participate and benefit from its resources. Ensuring universal access to safe, affordable, and enjoyable sports would increase the talented player pool and should be the focus of sports programmers (Fraser-Thomas & Côté, 2006). Canada Soccer and its stakeholders must consider the influence of inequities in the system so they can better collaborate to be more inclusive and accessible in the opportunities they provide all youth. Inequities influence the migration of players throughout the development pathway and the quality of clubs, leagues, and competitions.

Through the similar evidence-base of early specialization, it becomes evident that development should occur in as many children as possible from an early age (Martindale et al., 2005). More quality talent development environments will reduce the perceived need to transfer clubs locally or abroad. A system with more opportunities would reduce the emphasis on player

migration or competition between programs for the same pool of players. It would also help to reduce instances where players would have to move away from home seeking better playing experiences before they were socially ready to live on their own and be responsible for themselves.

More quality talent development environments dispersed throughout Canada would reduce the reliance on or perceived bias toward selecting players living in British Columbia, Ontario, and Quebec or involved in MLS programs. Canada Soccer needs to provide the same playing and training opportunities to potentially talented players in other provinces. At the very least, players in smaller centers would believe that they could attain an opportunity. By providing increased visibility and opportunity to other leagues and players, Canada Soccer can reduce the emphasis on specific programs and provinces and provide other potentially talented players with a chance to advance in the pathway.

As identified in the study's findings, despite the addition of a professional league for men and an updated coach licensing program, there still exists a view of severe resource inequity in youth soccer in Canada. Canada Soccer must be willing to invest significantly in the development system to increase participation in talent development pathways, increase facility availability, and reduce stakeholder development costs. A reduction or elimination of pay-for-play or profit-driven operation models would allow more access to talent identification and development opportunities and provide equal opportunities to players within a talent pools.

Additional resources from Canada Soccer being directed towards leagues and structures in need and away from organizations and communities would increase the number of players with access to the tools required to succeed. One suggestion from Finnegan (2020) was the introduction of development metrics which would guide resource allocation or funding.

Development metrics could remove the focus on winning and early specialization in youth leagues and move on to other aspects of development (i.e., the number of players progressing through the pathway). Alternatively, metrics could also determine what areas most need additional support, and Canada Soccer could redirect funding or human resources to these areas. Canada Soccer should continue to support and emphasize a development-first approach for youth clubs that focus on performance standards and health competition, not simply winning at development stages critical to talent development.

Another primary concern for coaches was the lack of flexibility in moving players across age group bands. This indicated a lack of tolerance for those players impacted by relative age and differences in physical development. Talent and its development are dynamic and change over time in adaptive and maladaptive ways, so any talent identification and development system must allow for such variations (Martindale et al., 2005). The prevalence of the relative age effect and its associated impacts were well established in the literature and throughout the participant's responses. With the non-linear and unpredictable nature of talent development, Canada should facilitate or, at the very least, encourage opportunities for youth players to move up for training or competition when they are developmentally ready or alternatively, move down an age group if their maturation level is not consistent with their age group peers. Good club and league structures provide various opportunities at various levels catered to the individual (Martindale et al., 2005).

The status and attitudes in youth sports would have to be monitored closely, and clubs would have to be presented with detailed guidance and supports to keep decisions consistent and in the child's best interest. Another consideration would be the establishment of transitional leagues, particularly from youth to senior/professional. Youth Soccer in Canada currently ends at

Under -17, which makes it difficult for youth players to continue at an appropriate level or results in them missing out on crucial development years at the senior level. This would also match the participant's preference to keep players in the system for extended timeframes. Transitional stages where athletes move from one level to another are needed to prevent dropout of the sport (Martindale et al., 2005).

6.3.3 Education and Professional Learning

Stakeholders influencing youth athletes play an important role in determining whether sports systems provide opportunities for players to reach their potential, promote lifelong participation, and shape personal development (Bergeron et al., 2015). Therefore, all sporting organizations should prioritize effective education and mentoring to develop competency and understanding amongst stakeholders. This would be particularly true of Canada Soccer since it was identified that most coaches are a volunteer or parent coaches. Understanding physical growth, biological maturation, and behavioural development, as they affect performance and injury risk in youth players, would be crucial for coaches. Since most coaches appear to have little or no previous understanding of these areas before they do licensing or coach professional development, a more holistic approach to the education of youth coaches would be essential to player development.

Continued education and professional learning are crucial for stakeholders, including coaches, staff, players, and parents. While there has been an expansion of the coaching licensing program in Canada, there appear to be continued challenges for coaches to attend and be certified. The following would be some practical recommendations to improve education and learning for stakeholders.

Canada Soccer should continue incorporating diversity, inclusion, and youth development learning into its coach licencing programs, club licensing programs, and resources. Considering the lack of experience for many coaches, it would also be beneficial to create a mentoring program in which more experienced and trained coaches mentor parent coaches or those just starting their coaching journey (Whitley et al., 2021). Those with less experience or knowledge would benefit by having a role model throughout their coaching journey (Martindale, 2005). Inclusion and diversity education can be complemented and reinforced through more athlete and stakeholder learning in areas such as cultural competence, trauma-informed practices, social–emotional learning, healthy competition, prevention of relationship violence and sexual misconduct, and addressing conflict (Whitley et al., 2021).

Coaches play an important role in supporting their athletes' life skills development and social-emotional learning and exemplifying the qualities of leaders. Providing coaches with opportunities to learn new pedagogy and the technical and tactical parts of the game is necessary for player development but does not guarantee a holistic player-centred learning environment. The participants' responses recognized the increased importance of psychosocial skills and social-emotional well-being to player development. Providing coaches with more practical knowledge about how to build this in their development environments will help provide all players with the best talent identification and talent development experience.

Considering that many coaches are volunteers, Canada Soccer must consider ways to provide learning to coaches in an accessible way. That would include providing adequate learning time and reducing licensing and professional development costs. More quality and qualified coaches across the country will benefit all players. The participants also suggested that board members at the community club level also have diverse experiences and levels of

understanding of soccer, youth development, and sports management. Considering this, it would be necessary to develop some learning support for these volunteers around these areas. This is crucial since club boards are making and implementing policies that affect the quality of programming available to youth players.

Parents play a key role in the youth sports educational experience (Bonavolonta et al., 2021). The study participants shared experiences reinforcing that parents' influence can be both positive and negative. Most research involving parents and youth sports is within the burnout and dropout literature (Fraser-Thomas & Côté, 2006). Parents/caregivers can help motivate youth players or create a negative experience for players, teams, and coaches that would increase dropout. Parents/caregivers must take the initiative in their child's healthy sport development by being aware of their changing roles, providing opportunities for unstructured play, learning to value the benefits of sports diversification, and being aware of pressures they themselves might demonstrate (Fraser-Thomas & Côté, 2006).

According to participants, providing content and accurate information about youth development, the talent pathway, and appropriate development opportunities for children and youth could ease conflict and burnout, anxiety, and drop out of youth players. Many youth players feel obligated to continue training and competing to fulfill parent or coach expectations (Fraser-Thomas & Côté, 2006). Parents/caregivers should be counselled by a sports educator or expert on positively impacting their children's sports experiences (Bonavolanta et al., 2021) and have more understanding of youth sports principles. Also, clubs, provinces, and Canada Soccer must regularly engage with parents/caregivers. It would also be helpful to educate parents/caregivers about managing personal expectations for their children, protecting them from overscheduling and advocating for developmentally sound youth sports experiences (Bergeron,

2017). If relationships are important aspects of talent development, parents/caregivers have tremendous power to shape their children's sports experiences and create a more developmentally appropriate talent identification and talent development system (Witt & Dangi, 2014).

Baker and Till (2020) indicated that a solution around understanding talent was for stakeholders to clearly understand what talent is and how it relates to the club and individual talent identification and development practices. To further define what talent is within the context of Canadian Soccer through specific talent indicators and to clarify the roles and responsibilities around talent identification and development would be helpful to the system. A clear performance model that includes and clear playing style, player characteristics, and coaching philosophy of the ideal soccer player for Canada should be established that is connected to an effective National Scouting and Identification system. Further professional learning for coaches, recruiters, and talent selectors would provide a greater understanding and appropriate practice around selection criteria and scouting. To make the most accurate decisions, it needs to be established which talent indicators are related to the potential for future success with sport-specific systems and what is the most effective way to identify, select, and develop sports talent. (Baker & Till, 2020). This study suggested that most youth soccer organizations rely on subjective decisions around talent identification and talent development. Canada Soccer could create clear selection guidelines around when talent selection can start and develop objective and subjective tools that can be used to monitor athletes and develop over time to help organizations to make informed decisions (Baker & Till, 2020).

6.3.4 Reimagining the Youth Soccer System

Player development programmes should be dynamic and interconnected due to sports talent's dynamic and multidimensional nature. This implies considering the potential to develop rather than exclude children at an early age. Therefore, organizations should design a flexible environment that meets the needs of all children and youth. Especially, the current system faces challenges across multiple levels and consistently does not allow significant numbers of players to reach their potential. Changes may cultivate a more developmentally sound youth system and acknowledge the specific needs of youth players (Whitley et al., 2021).

General concerns about the direction of youth sports in North America have resulted in researchers, practitioners, and stakeholders calling for changes in youth systems. However, adopting recommendations has been slow, and the challenge of ensuring young people's holistic well-being persists (Gould, 2019). Stakeholders need to reimagine the soccer identification and development systems in adopted, innovative, and coordinated ways to promote what is best for youth players, particularly those who enter talent pathways. It has been suggested that youth coaches who emphasize winning often exploit their players rather than considering their developmental stages and advancing their psychological and social best interests (Thomas & Côté, 2006). Dropout and burnout athletes perceived their coaches as less encouraging, supportive, and more controlling and autocratic than other athletes (Thomas & Côté, 2006).

Advancing the vision and strategy of sources could substantially benefit youth athletes (Fraser-Thomas & Côté, 2006). This would allow the youth soccer identification and development system to be leveraged to support the development of talents and enhance young people's personal development, health, and well-being outcomes. A healthy competition model focusing on youth players' physical, mental, emotional, and social needs could drastically improve identification and development outcomes for youth players. A training environment

focused on personal improvement and positive experiences within sport would help players participate longer in the sport. Clear guidelines and accountabilities can be provided to adults supporting the youth systems and how they can create a safe, caring, and stable climate and establish positive peer relationships on respect and trust.

It would be practical for Canada Soccer to collaborate with stakeholders to create more structured talent development environments, including expanding their Club Licensing program. It would also be necessary to continue to support and monitor a development-first approach for youth clubs that reward achieving performance standards and instead of winning (Till & Baker, 2020). This would include clear guidelines and policies allowing youth players to play up and down age groups to help mitigate the relative age effect and encourage individual development plans for players. Often potential negatives of talent identification and development environments are controllable by practitioners in designing appropriate learning environments that balance training, psychological load, and social aspects of the sport (Till & Baker, 2020).

Securing the services of a consultancy organization such as *Double Pass*² to evaluate the planning and organizational practices of Canada Soccer at the youth level would be helpful, as would a review of the identification and development processes used in the most successful soccer nations. Research on the player development systems in seven of Europe's most successful soccer nations highlighted many similarities in philosophies, principles, and components of player development at the youth level (North, 2014; North et al., 2014).

The most prosperous nations in senior and youth competitions shared common characteristics that less successful nations did not exhibit. The most successful nations adopted a

² *Double Pass* is a Belgian company that assesses, advises and educates soccer confederations, leagues, clubs, and individuals on optimising talent development. Double Pass has been used by many top clubs and federations in soccer.

comprehensive approach that addressed all the issues present in a consistent manner. The experts noted the importance of having a clear philosophy and plan, for example, concerning the development of player characteristics that would give them a better chance of eventual success (North, 2014). They adopted a systematic and long-term approach that was patient with players, noting differences between age and stage. They also noted the importance of holistically addressing players' development needs—psychological and social as well as physical, technical, and tactical—and recognized the importance of a high-quality and valued coaching and support workforce (North et al., 2014).

The current pay-for-play model prevalent in Canada Soccer is also exclusionary. It means only those with the ability to pay can attend and receive additional benefits found in the system. It gives an advantage to those from higher-socio economic backgrounds because they can attend private academies and pay for additional training, or travel more for competition. Children from higher socio-economic status have been shown to play and train more hours per week, more months of the year, and become more highly specialized in their sport than those from a lower socio-economic status (Kuhn et al., 2021). An academy system does not require families to pay to play but can be very costly to operate. It is especially costly to fund travel for adequate competition that will appropriately challenge the players. Reducing the cost on the players and clubs allows the players to focus solely on their performance and development. Support from governments and investors can help make this happen.

6.4 Limitations and Delimitations

The measures used to collect the data caused some limitations. After completing the interpretation of the findings, the researcher discovered that the way the data was gathered might have inhibited the ability to conduct a thorough analysis of the results. One such problem

realized after the fact was including specific questions in the survey that helped address an issue that emerged later in the study. With the interviews being open-ended questions, participants sometimes strayed away from the line of answers that would be helpful to the study. One participant also noted that some interview responses could be similar based on the person's training or certification. For example, several coaches might be inclined to answer the questions based on what was translated to them during a Canada Soccer coach licensing course or professional development session.

It would also be possible that the coaches' responses could be influenced by their own playing experiences growing up through the soccer system and that may have influenced their views. Studying the perspectives of the players, parents, or other stakeholders would greatly expand the project, but would be a recommendation for future research. Also, the level the participants coached at appeared to influence their responses. For example, a coach at a high-performance level (e.g., professional teams youth academy or Youth National Team) often spoke about high "standards" while a coach at a community local level (e.g., the Technical Director of a Youth Club) often spoke about "positive experiences" The researcher would not have been able to manage the study as it would bring a different context to the results.

Self-reported data is limited because it can rarely be verified (Markula & Silk, 2011). The researcher had to take what people said, interviews and the questionnaires at face value. As Markula and Silk (2011) note, several biases might affect the data: *Selective memory* might cause the participant not to remember experiences or events that occurred at some point in the past. *Telescoping* the participants could help them recall an event that occurred as if it happened at another point. *Attribution* is attaching positive events and outcomes to one's agency but attributing adverse events and outcomes to external forces. Participants may also *exaggerate* or

embellish events as more significant than is suggested. Finally, selecting participants for an interview might omit someone the researcher could have wanted to speak to and someone who could offer important data to consider.

The study also depended on access to people. In some cases, potential participants were unavailable for interviews. The researcher also requested participants representing the Yukon, Nunavut, and Northwest Territories but never received a response. Another limitation was that the inclusion criteria made it difficult to have equal representation from the female voice. There is a lack of female coaches with a National ‘B’ coaching license or higher. While the researcher made an effort to have equal gender representation amongst the participants, locating and gaining access to female coaches were difficult.

The researcher is also an active coach in the Canadian soccer system whose background would meet the inclusion criteria for participants in this study. There was an awareness of any potential bias when reviewing how the problem is stated, how selected data was studied or reported, what may or may not have been omitted, how events are ordered, people or places, or the use of words with a positive or negative connotation. The findings were not inflated or deflated to change the level of importance or base the findings on the researcher’s opinions or lived experiences.

Several delimitations to the study were considered. This study was limited to questioning only coaches who fit the inclusion criteria. It might also be valuable for future studies to compare the perspectives of parents, players, or other coaches outside the inclusion criteria. The inclusion criteria were selected because it was determined that these individuals would have the best scope of knowledge and experience to answer the research questions.

The researcher did not use structured interviews to minimize the obtrusiveness and influence on participants (Markula & Silk, 2011). Open-ended questions presented better-quality answers and allowed the participants to feel more comfortable with the research process. It may also allow the conversation to go in a direction that structured answers might not allow for. This study was delimited to just youth soccer. Talent identification and talent development within all sports have been an issue of considerable debate. Different team and individual sports would offer experiences based on their contexts. Talent identification is inherently difficult to predict. Talent evaluators and scouts from different sports would likely have different views on what constitutes talent within their own context.

6.5 Future Research Studies

Further to these recommendations and limitations, the researcher suggests further investigations into talent identification and development within youth soccer or expanding to other aspects of youth sports. Specific areas could include:

- Exploratory study of the practices of the primary stakeholders in youth soccer and their relationships with the hierarchical levels of governance at the NSO level, as well as a view to analyzing the impact of the relationships on structural equity and performance structures (Finnegan, 2020).
- Exploration of the lived experiences and journeys of young soccer players and their parents/caregivers in Canada to examine their perceptions of the dominant challenges facing them before and after entry into talent identification and development pathways, their progress through the pathway, transition to senior or professional organizations, and their exit point out of the system (i.e., What specifically impacts their career progression in Canada Soccer?)

- Continued research examining the influence of the environment created for children and youth by talent identification and development bodies warrants further investigation (Mills et al., 2012), including exploratory research to understand how coaches and practitioners can effectively teach life skills and foster development in youth or specific pedagogical issues such as instruction methods and learning settings (Thomas & Côté, 2006)
- Considering the reliance in Canada on regional EXCELL Centers and centralized provincial training centers, it would be helpful to re-examine their role given the research on child psychological readiness for competition and motivation for continued talent development participation (Fraser-Thomas & Côté, 2006). There is little evidence that talent identification is the key to talent development (Fraser-Thomas & Côté, 2006). There is more evidence that traits are built by one's career (i.e., sampling, commitment, desire, willingness to work hard, good coaching during adolescence., etc.) and cannot be identified in childhood (Fraser-Thomas & Côté, 2006). This should be the focus of talent identification and talent development.
- Continual examinations on how sporting structures and designs influence talent identification and development by looking at the importance of participating in sports that focus on deliberate play during ages 6-12 to see how increased participation from a street or court soccer impacts talent identification and development in Canada Soccer (Côté & Thomas, 2006).
- Further investigations that include special populations in talent development systems, particularly considering the elitism in talent development systems and define steps to ensure that all youth receive the best supports and experiences to reach their potential.

- Further investigations that warrant to analyze the role of player development of parent behaviour in talent identification and development systems, including the determination of the most effective ways and topic areas to engage parents and caregivers with programs regularly.
- Examination of the migration of players to neighbouring clubs, provinces, and programs through the talent identification and development system to determine why players transfer or transition outside of their community.
- Studies aims at determining a clear national identification and development plan for Canadian youth soccer that would include a clear definition of the ideal Canadian soccer player at each stage of talent development, as well as the viability of a national scouting/identification structure and national club guidelines regarding player selections or talent identification.
- Studies aims at determining ways to incorporate learning on diversity, inclusion, and youth development into licensing and professional development for stakeholders, including parents and board members.
- Continual research in children and youth sports to determine the most effective means to mitigate relative age effects.
- Assessing key social-emotional and psychosocial influences on talent development within Canada Soccer and examining the developmental characteristics of talent development pathway relative to best practice research (Finnegan, 2020).
- More research considers how system resourcing influences talent identification and development (Till & Baker, 2020).

6.6 Contributions

Leading soccer countries, particularly those where soccer is engraved in the fabric of culture, focus on identifying weaknesses and deficiencies in their talent identification and development structures (Auguste & Lames, 2011; North et al., 2014). These countries recognize that to achieve sustained success at the top levels of the sport, a strong foundation of talent identification and talent development must exist at youth levels. Many countries have initiated reviews and changes of youth soccer systems based on the failures of adult teams that are expected to be successful (Pouyandekia & Memari, 2020). While it is true that youth athlete identification and development are indeed complex and multifaceted, a youth sport delivery system can be designed to mitigate constraints and give all youth the best environment to achieve their potential.

While one may presume that Canada is a large sporting country, it appears to have created a soccer development system akin to smaller and less established soccer nations. Andrew et al. (2022) determined that systems in more prominent and prosperous soccer nations are characterized by effective participation rates and considerable financial and logistical resources, while less prominent soccer nations were characterized by lower participation rates and substantially fewer financial and human resources. The contribution of this study is that it identifies significant weaknesses and disparities that may be present within the Canadian youth soccer system that is likely prohibiting the development and advancement of the majority of youth soccer players in Canada.

Many of the themes and issues from this study can be looked at more closely to determine adjustments to the system that could impact talent identification and development processes in Canada Soccer. The perspectives provided by the coaches may offer some reflection

about how practices and processes described in the study impact their context. These same themes and findings could be used by stakeholders and practitioners in other youth sports contexts as knowledge and awareness since youth development principles remain consistent.

Practitioners need to continue to advance their understanding and knowledge of youth sports and development to ensure the best possible experience for youth. This study constitutes this through its discussion on quality talent development environments and insight into psychosocial and social-emotional learning. Researchers must stay ahead of factors contributing to positive and negative outcomes in youth sports and work with policymakers, practitioners, and organizations to develop more comprehensive models of youth athlete development throughout sports and disseminate the information to decision-makers. This study identifies those areas that can be further studied.

6.7 Concluding Thoughts

When analyzing the perspectives of the coaches and the available literature on talent identification and development, the question for Canada Soccer is whether they can consistently produce players capable of competing at the highest level of soccer when young players develop in a talent system that is disjointed and excludes the vast majority of youth soccer players in the country. From the participants' responses, it appears that there is a lack of coherence and consistency across the provinces, minimal financial investment to limit inequities, and the slow progress of stakeholders to buy into appropriate youth development principles. Canada Soccer is faced with an enormous challenge to identify and develop a significant number of players who can compete at the highest level because of these limitations.

If the player is to remain at the center of the identification and development process, there will be a need for a cultural and political shift throughout the ecosystem and buy-in from

multiple levels of stakeholders. Youth sports have become very adult and media-centred, reflecting an urgent need to review culture, organizational structural mechanisms, and the underlying philosophy for identifying and developing youth athletes. While there may be a structure promoted as an elite pathway starting at age thirteen, an environment has been created where evidence-based best practice is likely not being followed or unable to be followed because of adult's intentions. While full inclusion may be utopian in a youth sport setting, it is certainly possible to create conditions where youth have the best possible means to reach their potential. Small systematic or cultural changes could significantly impact Canada Soccer's success. A continued adult-oriented structure and business framework of youth soccer will continue to limit the success at every level of the talent identification and development pathways.

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Appendix A: Informed Consent Form

RESEARCH PARTICIPANT INFORMATION AND CONSENT FORM

Title of Study: *Factors Perceived by Under 15- Under 17 Youth Soccer Coaches to Influence the Identification and Development of Talented Youth Soccer Players in Canada*

Principal Investigator: [REDACTED]

You are being asked to participate in a research study. Please take your time to review this consent form and discuss any questions you may have with the study staff. You may decide to participate in this study and discuss it with your friends, family or (if applicable) your doctor before you make your decision. This consent form may contain words that you do not understand. Please ask the study staff to explain words or information you do not clearly understand.

Purpose of Study

This research study will study how youth soccer coaches at the Under 15- 17 level apply talent identification and development processes to their practice. It aims to understand further how Canadian youth soccer coaches can identify and develop more talented players.

A total of 16 participants will participate in this study.

Study procedures

In this study, you will participate in a 60m interview with the researcher answering questions related to talent identification and talent development within Canada Soccer at the Under 15 -17 level. Interviews will take place virtually or over the phone. A transcript of the interview will be provided to participants to ensure accuracy. If you participate in this study, you will have the following procedures: Provide a scheduled time for a 60m interview and confirm that the interview scripts' contents are accurate. Some follow-up questions to the interview might be required if the research deems it necessary to elaborate further on a specific topic area arising from the interviews.

Participation in the study will be for days/weeks/months/until a specific event.

[Where appropriate, state that the study will involve long-term follow-up.]

You can stop participating at any time. However, if you decide to stop participating in the study, we encourage you to talk to the staff first.

Risks and Discomforts:

There are no risks or potential discomforts for the participant.

Benefits:

Hopefully, the information learned from this study will benefit other coaches or studies focused on talent identification and development in the future.

Costs:

All the procedures performed as part of this study are provided at no cost to you.

Payment for Participation:

You will receive no payment or reimbursement for any expenses related to participating in this study.

Confidentiality

Information gathered in this research study may be published or presented in public forums; however, your name and other identifying information will not be used or revealed. Despite efforts to keep your personal information confidential, absolute confidentiality cannot be guaranteed. Your personal information may be disclosed if required by law.

Anything said in the interviews will be held in confidence and not be repeated out of the interviews.

The University of Manitoba Health Research Ethics Board may review records related to the study for quality assurance purposes.

All records will be kept in a locked, secure area, and only those persons identified will have access to these records. If your medical/research records need to be copied to any of the above, your name and all identifying information will be removed. No information revealing personal information such as your name, address or telephone number will leave *the* University of Manitoba.

Voluntary Participation/Withdrawal from the Study

Your decision to take part in this study is voluntary. You may refuse to participate or withdraw from the study at any time. Your decision not to participate or to withdraw from the study will not affect your care at this centre. If the study staff feels it is in your best interest to withdraw, they will remove you without your consent. We will tell you any new information that may affect your health, welfare, or willingness to stay in this study.

Questions

You are free to ask any questions that you may have about your treatment and your rights as a research participant. If any questions arise during or after the study or if you have a research-related injury, contact the study doctor and the study staff: [REDACTED].

For questions about your rights as a research participant, you may contact The University of Manitoba, Bannatyne Campus Research Ethics Board Office at [REDACTED].

Appendix C: Draft Demographic Information Survey

The researcher invites all potential participants in this study to voluntarily report demographic information that will be used to select participants that meet the inclusion criteria. All information is confidential. You may not be selected to participate in this study.

1. Gender:

- Female
- Male
- Non-Binary
- Prefer not to disclose
- Prefer to self describe

2. What city/town and province do you coach in?

3. Highest Coaching Certification achieved

4. What level of youth soccer do you coach?

5. How many years of coaching do you have?

6. Please briefly describe your experience as a coach in youth soccer.

Appendix D: Interview Guide

Research Questions

- (1) In the context of the Canadian system, what considerations do youth soccer coaches make when identifying and developing talented youth soccer players?
- (2) What constraints affect the identification and development of talented youth soccer players in Canada?
- (3) What opportunities and barriers influence how accessible and inclusive talent identification and talent development processes are to youth soccer players in Canada?
- (4) What can Canada Soccer prioritize to increase the number of talented players developed and identified in Canada?

How Talent Identification and Talent Development operates in the Canadian System

Question 1: Can you tell me about your experience in youth soccer as a coach/administrator?

Question 2: What do you consider a “talented” player in the context of youth soccer? What do you consider important when making judgements on youth players’ potential?

Question 3: What key predictors or indicators do you use to determine players’ potential and future performance levels?

Constraints Affecting the Identification and Development of Talented Youth Soccer

Players

Question 4: How should talent identification and development decisions be driven within a youth soccer context? Are you able to implement this philosophy? What types of constraints or successes do you experience with this?

Question 5: Would you perceive it to be an ideal TDE for your youth soccer players to reach higher performance levels of soccer in Canada or abroad? If not, what attributes do you feel need to be improved and added to improve the TDE environment for youth?

Question 6: What barriers/constraints exist in your area that limit or prevent the inclusion of youth players in a program that would improve their playing status and move up the development pathway outlined by Canada Soccer?

Barriers and Opportunities Influencing Inclusion and Accessibility

Question 7: Do you feel Canadian youth soccer players have access to quality TI and TD processes to help them reach their fullest potential?

Question 8: As a coach, how do you ensure that your program and learning environment are inclusive to all players regardless of their current skill standing? Do you believe this help or hinder all players from reaching their potential?

Question 9: How do you and your club account for growth and maturation constraints in youth athletes? What are some practical ways to put youth athletes in a position where they can participate in a learning environment that is not dictated by physical size or athleticism?

Question 10: Are coaches/ talent selectors educated enough to understand essential attributes in youth soccer? Can they remove themselves from selection biases that might exclude talented players from the TD process?

Question 11: Are competition between sports - soccer clubs and soccer clubs-soccer clubs an issue in the TD of youth soccer players? How do adult-driven professionalized youth sports models affect youth soccer players' growth?

Question 12:

Is talent development equitable in Canada Soccer? How do you and your organization account for unequal barriers to sport participation and ensure that everyone has access to the full range of opportunities to reach their potential? Are there talented players in Canada who are missed because they do not have the same training, education, playing experiences, or other programs and services?

Question 13: Can you comment on how sport participation/performance determinants like nationality, gender, Socioeconomic status, and relationships (coach-athlete, athlete-athlete, parent-coach, and parent-athlete) affect the TD pathway? Is there an avenue to encourage newcomers to Canada to participate in the game? Are there practical ways to reduce the financial burden of participating at competitive game levels?

What can Canada Soccer prioritize to increase the number of talented players developed and identified in Canada?

Question 14: What areas would you prioritize in TD and TI to increase the number of talented soccer players produced in Canada?

Table 1 Detailed Participant Demographic Survey

Participant	Gender	Current Region	Years of Coaching Experience	Highest Credential	Current Coaching Role
A01	Male	Atlantic	25+	CSA 'B'	Technical Director, Youth Club; Head Coach USport
A02	Male	Atlantic	25	CSA 'A'	Head Coach U Sport
A03	Male	Atlantic	20+	CSA 'A'	Canada Games Team Head Coach; Head Coach U Sport
C01	Male	Central	15	CSA 'B'	Youth Club Technical Director; U Sport Coach
C02	Male	Central	20	CSA 'A'	Canada Youth National Teams; EXCEL Program
C03	Female	Central	20+	CSA 'B'	Provincial Team Coach
C04	Male	Central	15	UEFA 'A' CSA 'B'	Professional Team Youth Academy Coach; Technical Lead for PSO
P01	Male	Prairie	10	CSA 'B'	USport Head Coach; Professional Team Coach
P02	Male	Prairie	12	CSA 'B'	Youth Club Technical Director
P03	Male	Prairie	30	CSA 'B'	Youth Club Technical Director
P04	Male	Prairie	15	CSA 'B'	Technical Lead PSO
W01	Male	Western	9	CSA 'A'	Technical Director, Youth Soccer Club
W02	Male	Western	7	CSA 'B'	Private Academy Coach and Director
W03	Male	Western	20+	CSA 'A'	Technical Director, Professional Team's Youth Academy

W04	Female	Western	10+	CSA 'A'	Canada National Teams
W05	Female	Western	14	UEFA 'A'	Canada Youth National Teams

Table 2: Characteristics of Talented Canadian Youth Soccer Players Compared to North et al. (2014)

Characteristic	Talented Players will have high levels of the following characteristics and competencies according to participant responses	Talented player will typically have high levels of the following characteristics and competencies (North et al., 2014)
Physical/Physiological	<ul style="list-style-type: none"> - Visual perception - Physical competency - Changes of speed and direction - Coordination - Physical maturity - Vision awareness - Speed, quickness, and power 	<ul style="list-style-type: none"> - Speed/explosive speed - Strength - Power - Hypertrophy - Aerobic fitness/endurance - Muscular endurance - Flexibility
Psychological	<ul style="list-style-type: none"> - Cognitive maturity - Hunger - Drive - Decision-making - Speed of processing decisions - Critical thinker, problem solver - Mental resilience - Temperament - Self-regulation - Desire - 3 C's: Confident, creative, and competent 	<p>Psychological characteristics that benefit the individual</p> <ul style="list-style-type: none"> - <u>Ambition</u>: a desire to become a great player - <u>Motivation</u>: especially intrinsic motivation, love of the game - <u>Effort and commitment</u>: engagement, investment, work ethic, determination to succeed. - <u>Awareness</u>: high level of awareness of self in all contexts; realistic performance evaluation; strengths and weaknesses and acts accordingly - <u>Attentiveness and focus</u> - <u>Vision</u>: knowing what it takes to succeed, goal setting, Physical; planning, effective and appropriate imagery use - <u>Discipline</u>: dedication, taking responsibility, sacrifice, self-control,

		<p>concentration, distraction control, delaying gratification</p> <ul style="list-style-type: none"> - <u>Resilience</u>: mental toughness, perseverance, anxiety control, coping strategies (with and under pressure), responding to setbacks appropriately - <u>Character</u>: attitude, identity, ability to understand and position the self and influence social environment - <u>Knowledge, understanding, and appropriate attribution.</u> - <u>Confidence</u>: self-belief, self-reinforcement (measured, not arrogant) - <u>Competitiveness</u>: intensity of performance, a desire to win - <u>Desire to learn/improve</u> identify and work on weaknesses; receptive to knowledge; growth mind-set. - <u>Effective learning</u>: listens, observes, discusses, thinks, understands concepts and ideas quickly, reflects. - <u>Seeking out learning/practice opportunities</u> - <u>Evaluating performance and imagery</u>: problem focused, aware of, seeks feedback on, strengths and weaknesses: uses imagery to construct performances. - <u>Self-regulation</u> - <u>Enjoyment and 'flow'</u>: (enjoyment does not appear to be a necessary part of performance though it does. appear to mediate motivation and commitment)
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		<ul style="list-style-type: none"> - Consistency: (staying there) <p>Psychological characteristics that benefit the team (and by default the individual)</p> <ul style="list-style-type: none"> - Leadership - Awareness of others – empathy - Caring - Humility - Responsibility - Solidarity - Respect - Communication - Social skills
Social/Lifestyle	<ul style="list-style-type: none"> - How the player responds to specific situations - Dealing with adversity - Communication skills - Leadership - How the player impacts the sporting experience - Coachability 	<p>Social characteristics that benefit the individual:</p> <ul style="list-style-type: none"> - Supportive parents (informational, emotional and practical) - Supportive important others (partner, friends, team-mates, coaches, club officials, broader social connections) - Access/exposure to player development resources - facilities, coaching <p>Social characteristics that benefit the club/team</p> <ul style="list-style-type: none"> - Team spirit and cohesion - Teamwork - Collective responsibility - Community understanding and integration. <p>Lifestyle characteristics and competencies.</p> <ul style="list-style-type: none"> - Appropriate education - Appropriate social choices - Nutrition

		<ul style="list-style-type: none"> - Hydration - Rest and recovery - Managing finances effectively and responsibly
Movement/Technical	<ul style="list-style-type: none"> - Receiving the ball - Technical competence - Ball control - Comfort with the ball - Passing over short, medium, long distances - Efficiency of movement - Speed the player can apply a certain technique. - Disguise intentions of movement or skill - Passing and shooting creativity - How the player can manipulate the ball 	<p>Fundamentals of movement</p> <p>Agility Balance Coordination</p> <p>Fundamental movement skills</p> <p>Stability Object control Locomotion skills - mobility Fundamental sports skills, sport-specific skills</p> <p><u>Ball control</u> - receiving and controlling the ball as and when it; arrives with an assured, varied and secure touch, using all parts of the body; keeping possession of the ball. While running, turning, stopping</p> <p><u>Ball mastery and manipulation</u> – tricks, ability to spin, float and drive the ball.</p> <p><u>Running with ball/dribbling</u> –</p> <p><u>Passing/crossing</u> – releasing the ball accurately and instantly over a variety of distances using both feet on any surface; receiving and exchanging passes with others whilst moving at optimum speeds; one-touch passing</p> <p>Heading</p> <p><u>Shooting and finishing</u></p> <p><u>Challenging and intercepting</u> –changing feet and body position quickly whilst retaining balance</p> <p><u>Awareness and control</u> – operating in congested areas with speed and</p>

		precision <u>Position specific skills</u>
Tactical	<ul style="list-style-type: none"> - Execute solutions. - Connect Solutions - 1v1 situations - Positional qualities - Playing roles - Able to execute in a broader system - Game understanding - Proactive defending - Timing 	<ul style="list-style-type: none"> - Game understanding - Strategy - Game intelligence/reading the game/game sense - Team/unit understanding and organisation. - Recognising opportunities to attack - disrupting stable systems. - Recognising defensive threats - Game control and manipulation - players who can influence the tempo and shape of the game. - Positioning - Knowing about ball actions - Knowing about others' actions - Acting in change situations - Decision-making - Creativity - Risk management

Table 3 Attributes of “Potential” in Canadian Youth Soccer Players as Described by Participants

Characteristic	Characteristics and Competencies stated by participants that identify a player with potential
Physical /Physiological	<ul style="list-style-type: none"> - Height - Speed and Quickness - Exceptional physical capabilities
Psychological	<ul style="list-style-type: none"> - Attitude and interest - Resilience - Confidence - Problem solver - Faced adversity. - Persistence to work through challenges. - Self- Regulation - Training mentality
Social/Lifestyle	<ul style="list-style-type: none"> - Playing regularly at a good level - Work ethic - Character - Personality traits - Habits (e.g., how they warm up, how the player reacts to things going wrong) - Enjoy the development process and the sport. - Solves problems individually. - Passion for the game - Those who work harder and longer than anyone else in their position. - Attitude with coaches, peers, and teammates - Can they survive a new environment outside their comfort zone - Commitment
Movement/Technical	<ul style="list-style-type: none"> - Ability to perform at a high level in relation to their peers. - Showing the promise to be able to progress into excelling in whatever their sport is compared to their peers. - Handling the ball under pressure - Skill competency, exceptional technique - Competency in other sports - Passing

	- Technical proficiency
Tactical	<ul style="list-style-type: none">- Make quick decisions.- Takes responsibility within the system of play.- Apply their decision-making in a bigger setting or older age group.- What level the player is playing at- Is the player getting consistent minutes at a high level