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PERCEPTIONS CONCERNING SUCCESSFUL DEVELOPMENT OF FINNISH PLAYERS INVOLVED IN THE NATIONAL FOOTBALL LEAGUE (NFL)			
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Master's Thesis in Sport			
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Spring 2017			
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### **ACKNOWLEDGEMENTS**

First and foremost, I want to thank my participants for willingness and enthusiasm in participation.

I want to thank all my teachers and supervisor Dr. Montse Ruiz.

My peers and colleagues for their support and advice.

The University of Jyväskylä itself for the opportunities and challenges, and everybody involved in the Sport and Exercise Psychology Master's program.

To Liikunnan Riemu and the Jyväskylä basketball Manatees for balancing my studies with exercise.

To JYP Akatemia and Jyväskylän Jaguaarit for allowing me to participate and apply my skills.

To my friends and family around the world.

Finally, to my immediate family for pushing me forward.

#### **ABSTRACT**

Kuuttila, Karri, 2017. National Football League's Professional Athletes' Perceptions Concerning Successful Development in American Football. Master's Thesis in Sport and Exercise Psychology. Faculty of Sport and Health Sciences. University of Jyväskylä. 51p.

Development of American Football in Finland is largely influenced by its licensed participants and Finland's American Football Union (Suomen Amerikkalaisen Jalkapallon Liitto, SAJL). To increase competitive excellence and the level of competition at national and international levels requires certain psychological skills in supportive environments, which later have to be turned into opportunities. Multiple large-scale studies (Bloom, 1985; Csikszentmihalyi, Rathunde, Whalen, & Wong, 1993) on talent development in a vast number of areas (art, music, sport, science), show that helping individuals enhance competence is not just hand picking talented people and introducing financial contributions. Turning talent into accomplishments involves the development of psychological skills, systems of habit, orientations, and the presence of supportive environments that nurture physical and mental development (Gould, Dieffenbach, & Moffett, 2001). The aim of this study was to examine the perceptions of Finnish NFL experienced athletes' concerning their paths to success in American Football. Participants in this retrospective case study were five Finnish players, who had played in the NFL. Individual interviews questioned players about psychological characteristics, mentorship, and specialization. Results indicated that psychological development of talented athletes happened over a long period of time. Participants used a variety of psychological skills incorporated throughout their careers influenced by multiple people such as family members and coaches. Praise that was realistic, believable and punctual was found to have more effect on the athlete than praise that was meaningless, delayed, and did not stem from something specific. Psychological talent development was best seen as a system made up of many influences and factors that include not only important people to self, but also achievement strategies, balanced motivation, and dealing with the results. This long process, in regards to American football, requires a proper support system and is nurtured by encouragement and exposure to fun if success is to be achieved. By creating a psychological profile for the SAJL website, the importance of psychological skills, orientations, and habits may be further developed and understood within coaching, talented athletes, and the supporting networks around them.

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#### 1 INTRODUCTION

This study was designed in order to educate the Finnish American football community and other European American football enthusiasts on the importance and application of talent development, and the effective way of developing talent in a low funded European setting. If Finland's American Football Association (Suomen Amerikkalaisen Jalkapallon Liitto) and the American football teams participating within its guidelines are to increase their competitive excellence on a national and European level, talent development is an area they must focus on. With American football athletes being limited in Finland, teams must understand the importance of working developing the players that are available. Multiple large scale studies (Bloom, 1985; Csikszentmihalyi, Rathunde, Whalen, & Wong, 1993) on talent development in a vast number of areas (art, music, sport, science) show that helping people enhance competence is not just hand picking talented people and introducing financial contributions. Turning talent into accomplishments involves the development of psychological skills, systems of habit, orientations, and the presence of supportive environments that nurture physical and mental development (Gould, Dieffenbach, & Moffett 2001). However, few studies to date have been conducted on talent development in American Football, none concerning American Football in Europe. A need exists to better understand the psychological characteristics of top level Finnish American football players and how they developed talent.

Athletic talent development in sports can be influenced by a number of different factors. In a study by Gould (2001), Olympic athletes were characterized by a number of psychological characteristics such as confidence and mental toughness, but also multiple individuals and institutions influenced their psychological development particularly coaches and family members. Mentors can have an influence directly by teaching certain psychological lessons, or indirectly by modeling or networking (Gould, 2001). It is commonly accepted that psychological characteristics can be the difference maker in elite level sports because physiological characteristics in top level of sports tend to be even. In addition, athletes often see psychological characteristics having more impact during heavy pressure situations. Psychological characteristics are often associated with peak performance, which can result from high levels of optimism, dispositional hope, and adaptive perfectionism (Williams & Krane, 2001). In addition to psychological

characteristics, mentorships, and systematic orientations, talent development can be influenced by the practice environment. The things we do in childhood and adolescence and who we do those things with can have a surprising influence on both athletic and mental development. This study makes a contribution by providing evidence through examination of sport participation histories of five current and former athletes with NFL experience and their opinions and methods of achieving success in American football.

## 1.1 Specialization\Sampling

The specialization vs. sampling debate dates back to Ericsson's (1993) suggestion of the benefits of deliberate practice to achieve elite performance. He believed that in order to achieve elite performance, one should begin working on sport specific skill development during childhood. However, Coté (1999) introduced a counter argument to Ericsson's claim, stating that involvement in various sports, and participation in deliberate play during the sampling years is beneficial in achieving elite performance. Coté emphasized that children should be having fun during middle childhood. The sampling years suggested by Cóté link by age (7-11y) to the concrete operational stage suggested by Piaget (1954). The concrete operational stage of development is a major turning point because children begin developing cognitive operations and applying logic (Piaget, 1954). It is safe to say that the sampling years are critical, yet sensitive in most all aspects of development (DeBord, 1996) making the idea of having fun rather than investing time during sampling years logical in terms of overall success. Furthermore high amounts of deliberate play build foundations of intrinsic motivation through behavior that is enjoyable (Coté, 2009). Self-determination theory (Froiland, 2012) predicts that early intrinsic motivational behavior (deliberate play) will have a positive effect over time on an individual's overall motivation and ultimately the individual's willingness to engage in more externally controlled activities (deliberate practice). Intrinsic motivation was found to prolong careers, ease transition periods in sport, and increase sport enjoyment (Froiland, 2012).

A central issue in specialization\sampling is their efficiency on different types of sport practices. This debate is commonly accepted as sport specific, (Coté, 2009) the lack of conclusive empirical evidence lies within specific sports and specific position groups

within sport teams. Paths to elite performance have been established for many sports, but little evidence exists for sampling\specialization and career paths in American Football. Career peaks help distinguish between the usefulness of early specialization in sport specific settings (Coté, 2009). Sports such as figure skating and gymnastics tend to have careers that peak prior to full maturation (early\late teens) requiring sport specific experience during sampling years to achieve greatness. This directly affects career length, as sports with early peaking careers seem to have shorter careers (Coté, 2009). Also early focus on structured training can have a negative effect on an athlete's biological development and physical health (Caine, 1989). Evidently the quality of early learning experiences is critical in regards to continued participation (Cóté, 2009). In other words mental wellbeing may be influenced by structured training during sampling years, and cause dropout and burnout (Gould, Tuffey, Udry, & Loehr, 1996). In a study by Baryanina and Vaitsekhovskii (1992) Russian swimmers showed that athletes who specialize between ages 12-13 spent more time on the national team and ended their careers later than swimmers that specialize between ages 9-10.

Sports, such as basketball, rowing, ice hockey and tennis share commonality in that peak performance occurs after maturation (20s, 30s) rendering specialization during sampling years unnecessary (Coté, 2009). Elite performance is often preceded by attending, or sampling multiple sports (Coté, 2009). High amounts of deliberate play during sampling years may establish a range of motor and cognitive experiences that children can ultimately bring to their principal sport of interest. For example, the famous soccer star Jari Litmanen played ice hockey and football for most of his childhood. Jari claimed to convert lessons he learned in ice hockey to the soccer pitch. In a documentary called "Kuningas Litmanen", Jari talked about momentum of the goalkeeper on the ice, and using that same idea to score goals on the soccer field.

#### 1.2 American Football

Empirical literature regarding American Football traditionally focused on how the game has evolved. To date, multiple articles have been written about concussions as the NFL concussions settlement was upheld by appeals court in April 2016. This means that many

former players will be getting monetary rewards due to suffering concussions and brain injuries (Maese, 2016). Research on talent development in American football is scarce. The following is a brief explanation of the game of American football: American football is being played on a 100 yard field between two teams of eleven players. NFL teams consist of 53 players that make up offensive, defensive, and special teams units that take turns on the field. The aim of the game is to move the ball into the opponent's end zone in order to score a touchdown for six points, and an extra point. This is achieved by moving the ball down the field in a series of plays or downs. This can be done by passing the ball through the air from quarterback to receiver, or by a running back by rushing the ball on the ground. The offence must move the ball at least ten yards down field every four plays in order to keep possession of the football and earn another four downs to drive towards the opponent's end zone. If the defense prevent them from making these ten yards the team with the ball must either punt the ball to the opposition or if close enough, attempt to kick a field goal through the upright posts worth three points. After four 15 minute quarters of play, the team with the most points wins the game (NFL.com, 2016). American Football is a strategic game which involves full contact physical play, teamwork, clock management and physical battles on the line of scrimmage. This often means that on game day players have to be mentally and physically ready to go to battle as units. This is important to keep in mind when analyzing the results of this study.

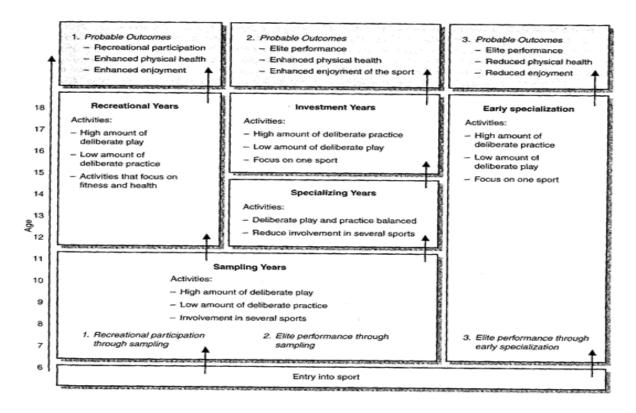
Early diversification during sampling years is beneficial in many team sports such as basketball and ice hockey (Coté, 2009). There is not a great deal of research on crosstraining in American football. However, according to Bompa (1995) the suggested age to begin training American football is 12-14, the age to start specializing is 16-18, and the age when highest performance is achieved is 23-27. A recent poll (Seifert, 2014) investigating sporting histories of NFL quarterbacks revealed some interesting trends. Out of the 128 quarterbacks surveyed, 122 (95%) played two or more sports in high school. Almost 70% played three or more sports. Only five backups reported single sport involvement. Another study published by Bridge (2013) found there to be a significant correlation between the number of sports at the age of 11, 13, and 15 and the level of competition between the ages of 16-18. Three sport teenage athletes were significantly more likely to compete at a national standard, while one sport athletes at a club level. This raises the question whether

late specialization is beneficial in football, and more importantly within different positions groups.

### 1.3 Developmental Model of Sports Participation

The developmental model of sport participation (DMSP) is a framework that establishes pathways in athletic expertise (Cóté, 2007). As Figure 1 depicts, elite performance is achieved in two of the three paths shown. Early specialization can lead to elite performance but sampling. Specializing, and investing can lead to a healthier level of elite performance. Sampling years within childhood tend to positively affect physical health and sport enjoyment in adulthood. Elite performance can be achieved without sampling, but figure one suggests that physical health and sport enjoyment might end up suffering. It is hypothesized that Finnish NFL-experienced elite athlete's fall under path 2 on the DMSP, meaning that the most successful athletes in Finnish American football have 1) played more than one sport, 2) participated in high amounts of deliberate play during their sampling years, and 3) specialized later into American Football and their position.

Figure 1: The developmental model of sport participation (DMSP)



### 1.4 Role Models, Social Influences, and Mentorship

The impact of mentorship is often overlooked in sports. The range of domains it affects is surprisingly vast in content. Athletes often credit mentors as critical impacts on careers, and sometimes blame the lack of mentorship for failure. Mentorship in American football can be critical in multiple career stages, but especially in professional football. Experiencing mental repetitions of the unknown future can be a crucial tool for career transition preparation. It is commonly accepted that families provide initial role models for children, (Warren, 1997) although Fitzclarence and Hickey (1998) suggest that strong role models can also come from sport and celebrities. The importance of athletes and celebrities was made evident through the 1991 study by French and Pena, were 100 students were asked to identify three people they would most like to be. The results showed a shift from family towards famous people. In addition to role models experienced people can help less experienced people through mentoring (Lough, 2001). Observing and interacting with peers, or peer mentoring can increase cognitive development and learning. Mentorship was found to have a relationship with increased self-efficacy and healthy behavior change (Warren & Payne, 1997). Mentors often take a more personal interest in the mentee focusing on the mentees long term development, while a coach might be more focused on development of skill performance (Starcevich, 1998). In any regard coaching is a position where mentorship could be viewed as most appropriate. Especially when coaches reach a certain level of experience they were found to have subsequently embrace the tasks of a mentor (Schinke & Salmela, 1995). Mentorship relationships have been found to affect many areas of development such as increases in networking and social interactions (Ferber, Pittman, & Marshall, 2002), increased communication, improved goal setting, increased motivation, confidence and enthusiasm.

### 1.5 Achievement Goal Theory of Motivation

In addition to understanding participants' paths in sport participation development, specialization, and investments, this study investigated psychological skills development and orientations. One of the aims was to examine the achievement goals and orientations of each participant to establish a better understanding of top level traits in American football players. The Achievement goal theory (Roberts, 2001) dates back to the late 1970's when

Carol Ames, Carol Dweck, Marty Maeher, and John Nicolls began conducting research programs focusing on achievement and motivation in the University of Illinois (Roberts, 2001). Dweck (1986) published a study of helplessness in an achievement setting in grade school aged children, and found children of equal ability to display different responses to failure. She accepted the achievement goal construct as the key explanation. Two years later Dweck identified two types of behaviors associated with the achievement situation: Performance goals; in which the purpose is to demonstrate one's capability and avoid showing incompetence, and learned goals; with the purpose of developing competence (Elliot, 2001). Performance goals were thought to lead to mastery response when accompanied by high confidence in ability, but were thought to lead to helplessness when accompanied by low confidence in ability. Learning goals were thought to lead to mastery regardless of the level of confidence.

Nicholls (1984) presented two goal orientations related to ability that are adopted by an individual and act as an action plan emulating that individual's personal path of accomplishment in a particular situation. A task-oriented individual focuses on developing skills, acquiring new skills, and demonstrating mastery at a task (Nicholls, 1984). Taskoriented individuals demonstrate ability based on maximum effort, referring to self, and seeing improvement as success. Ego-oriented individuals differentiate the notion of ability by demonstrating ability through outperforming others using minimal effort and talent (Nicholls, 1984). Research investigating the affiliation between sportspersonship and achievement goal orientations proposed that: (1) high task-orientation positively correlated with sportspersonship (Lemyre, 2002), (2) high ego orientation positively correlated with a decline in sportspersonship (Lemyre, 2002), cheating and unsportsmanlike behavior, (3) ego-oriented athletes have a higher buffer for acts of intentional injury against opponents (Duda, 1991), (4) prosocial choice is displayed more by task-oriented athletes than egooriented athletes, (5) and task-orientation was found to positively predict respect for others and the game (Gano-Overway, Guivernau, Magyar, Waldron, & Ewing, 2005). Nicholls (1984) Achievement Goal Theory also suggests that goal orientation is not enough to determine motivation. Perceptions of motivational climate include perceived ability. According to Epstein (1988) children's perceptions of the motivational climate are largely influenced by the teacher's role.

### 1.6 Mental Toughness, Belief, and Focus

Another set of psychological skills that appeared important in American football were subcomponents of mental toughness, as toughness defines the game itself. The way elite American football players defined mental toughness and how they used those subcomponents to develop themselves is beneficial for future populations, coaches, and sport psychologist to enable those tactics in the future. Jones, Hanton, & Connaughton (2002) were the first to investigate mental toughness using empirical evidence. Prior to this, mental toughness has been suggested as significant psychological contributor to success through anecdotal evidence (Jones, Hanton, & Connaughton, 2010). Jones defined mental toughness as the psychological edge of mentally tough people to endure with pressures that occur with better success than their opponents. He identified 12 important characteristics that linked with self-belief, focusing, coping, motivation, desire, and dealing with pain and hardship. In 2007 Jones et al investigated mental toughness in Olympic and World champions and their coaches. The results included subcomponents of mental toughness identified by the super elite athletes and coaches. Among these subcomponents were belief, focus, goals, motivation, moving forward (future oriented), control (thoughts, feelings, self & environment), awareness, handling pressure (failure & success), and attitude & mindset. These subcomponents of mental toughness were dimensions of training, competition and post competition. This framework provided context to application of the subcomponents, and how mental toughness could be developed and maintained.

Bull, Shambrook, James, & Brooks (2005) studied highlight factors perceived to influence mental toughness development. The study focused on global themes in cricket under four categories: character, thinking, attitudes, and environment. The categories were suggested to provide an implication for a "winning mind" and development of mental toughness, but lacked details on its development. Connaughton, Wadey, Hanton, & Jones (2008) found three distinct career phases in developing mental toughness, using Jones et al. (2002) 12 attributes. (1) To begin the process of mental toughness in early the year's knowledge, inspiration, and motivational climate stemmed from effective leadership, observing elite athletes, and advice from parents and coaches. (2) Competitive rivalry, receiving guidance, rationalized successes and failure, and grasping social support were connected with middle years, (3) while in the later years' experience in both competition

positive experience along with simulation training and rationalization of setbacks helped develop mental toughness (Jones et al., 2010). Connaughton also identified critical incidents such as divorce and loss of peers to have a crucial role in development of mental toughness.

### 1.7 Talent Development

Bloom (1985) studied highly talented individuals from different areas of expertise to better understand how they developed their skills across their lifespan. He identified approximately 25 talented individuals from multiple domains such as mathematics, Olympics, neurology among others. Participants were interviewed about their skill education, parenting and childhoods. Parents were also interviewed. The results showed that participants developed their skills in phases: early age development phase, middle year's development phase, and later years development phase (Sosnaiak, 1985). The phases offered parents advice on encouragement and children's talent development, but the transitions between phases were unclear. Initially, it was advisable to keep talent development light and simple, and value the child's interest (Winker, 2013). Development in the early phase could be informal. The middle phase required a decision concerning further investment, weather time, money or emotion (Bloom, 1985). This phase also involved gradual increased challenge and instruction for the child. It was crucial to understand what the child wants in terms of talent development. Natural ability may determine the level of a child's success in a specific domain. Excessive practice was found to help some, but bourdon others (Winker, 2013).

Bloom's (1985) research is over thirty years old but it still remains relevant in the field of talent detection, and the families with exceptional gifts. Although the current study's focus renders towards talent development Bloom's individual narratives regarding talent detection provided compelling stories of the journey to the highest levels of performance (Winker, 2013).

In summary we know that elite athletes develop through at least two paths, sampling and specializing (Cote, 1999). We also know that role models and social influences play a part in the development of elite athletes. Finally, we know that elite athletes develop psychological characteristics in all dimensions of competition to achieve success. However,

less in known reading are the ways NFL experienced athletes specialized, the social influences they had prior and throughout their careers, and the psychological characteristics they developed throughout that time. The true objective following this study and as we learn more about psychological talent development, is to better equip the American football community in Finland and the rest of Europe, so they can achieve performance objectives. Howe (1999) once said "we cannot map people's lives in advance," but what these professional American football players have taught us is that a lot can be done to get the desired outcomes.

### 2 PURPOSE OF THE STUDY

The purpose of the study was to investigate paths to specialization, social support, and psychological characteristics of five NFL professional athletes. Particular emphasis was packed on identifying timing of specialization, and identifying psychological characteristics during different phases of specialization as they pertained to Cóté's (2009) Developmental Model of Sport Participation, and the range of influence different types of mentorships had on participants' career development in American football. It was imperative to study players' experiences, stages, and key influences in their own development, which led to investigations of other components that influenced talent development in American football.

### 3 METHODS

# 3.1 Participants

At the time of this study there were seven Finnish American football players with NFL experience, out of which five were asked to participate (71%). The criteria for participant selection included Finnish nationality and experience of American football in Finland and the NFL. Two potential participants were left out for separate reasons; the first potential participant fit most of the criteria for the study but had no experience playing American Football in Finland. The other potential participant is the author of this study and therefore took the role of analyst (see 3.2 Role of Researcher). All five remaining participants had been invited to NFL training camps across the US. All Five players began their careers in Finland and each followed their own path to the highest possible level. All participants also played for the Finnish national team at some point of their career. Two of the participants played college football in American, and four participants played in NFL Europe. The age of the participants ranged from 28 to 56 (M of age = 38.8), although four out of five participants were in their 30's. All participants had a minimum of 9 years overall American Football experience. All participants currently live in Finland and have one or more siblings.

#### Participant Positions/Duties

The following explains the occupied paid position groups which the participants specialized in and the duties they had on the field:

TE = Tight End, a 6th or 7th addition to the offensive line. Job includes blocking or making room for the ball carriers and occasional routes to receive and advance the ball through an aerial attack system.

DL = Defensive Line, the defensive front expected to stop and penetrate the offensive attack scheme, and attempt to disrupt the aerial pass attack.

LB = Linebacker, the second defensive front designed to assist the defensive line against the run attack. Occasionally dropping into pass coverage, the linebackers often lead the team in tackles.

OL = Offensive Line, the front five blockers who make room for the run attack and protect the quarterback in the aerial attack. The offensive line is often considered the backbone of the offence. The hard workers that enable the skilled players to make plays.

#### 3.2 Role of the Researcher

The author of this study also has NFL experience, and would fulfill the criteria for participation, however, he served as a researcher and analyst. Participation eligibility and firsthand experience of similar situations enabled the author to interview and analyze data from a unique perspective referring to expertise in American football knowledge, commonality with participants, their Finnish background, and overall knowledge on the process of becoming a professional American football player. The high participation rate suggested trust between researcher and participants, which could have been due to the author's eligibility within the group of study. Secondly the author knew personally two out of five participants indicating a good interactive relationship, and was familiar with the three other participants, but did not have a prior relationship with them. All interviews were conducted through a semi structured interview guide; therefore answers were not affected by personal relationships with participants.

#### 3.3 Instrument

Both an interview guide and an interview preparation questionnaire were created. The questionnaire prepared both participants and the researcher for the interview and collected closed ended answers about sport participation and demographics. The semi structured interview guide was created to outline and keep the interview on the track of relevance. The purpose was to pinpoint the perceived important factors during each participant's career that enabled their success in American football.

### Interview Preparation Questionnaire

The interview preparation questionnaire (see Appendix 1) was created to help both the author and participant prepare for the interview. It provided data and demographics for the interview and the participant got a sense of additional interview content. The questionnaire was based on both ESPN's quarterback survey 2014 (Seifert, 2014), which focused on the

specialization vs. sampling debate, and the intensity of training model by Blomqvist in 2013. The questions from ESPN's quarterback survey 2014 were used to get a better understanding of each player's family history, credentials on the American Football field, and to establish a timeline for football related events throughout their careers. Questions included inquiries of sports played in high school, family size/income to the types of in game strategies used by players. Topics and themes included popularity of early sampling within NFL quarterbacks meaning that almost all surveyed quarterbacks played more than one sport in high school. Other themes included more quarterbacks coming from big families of several siblings, upper-middle class, and a throwing heavy offensive play orientation in high school called the spread offence (Seifert, 2014). The quarterback survey served as a model and only some questions regarding family history and specialization were used. Two questions were used from Blomqvist's (2013) intensity of training model to establish intensity of training for American football and individual training during childhood, adolescence, and early adulthood. This gave additional information on physical training during sampling, specialization, and investment years.

#### Interview Guide

An interview guide (see Appendix 2) was created to gather in depth information about specific aspects raised on the survey including excellence in American football and psychological tools. The interview guide included four sections. The first section called "Football history" covered the American football experiences. A sample question was: "What led you to choose American Football?" The second section focused on the positive and negative career events for example: "Describe how you overcame adversity during tough times?" The third section was created to examine psychological strategies being used in the process of becoming professional. An example of a question was: "How do you feel about losing?" The final section investigated social influences related to mentorship: "Elaborate on the importance of the coaches in your athletic career?" The interview guide was built to outline the player's story in as much detail as possible potentially bringing out the relevance of psychological skills and mentorships among other things.

#### 3.4 Procedure

Access to participants was gained through personal contacts. Initially participants were individually contacted via email, telephone, and social media, including Facebook and Instagram. Each participant was asked to participate in a master's thesis study regarding American football and to sign informed consent. The initial contact also pleaded for an email based interaction for future processes and for appropriate contact information of participants. The approach to contact each participant was different, due to authors' relationships with some of the participants. Once participants agreed to participate in the study they received an email with attachments including a consent form and an interview preparation open ended questionnaire. The consent form re-explained the purpose of the study and listed all the details of the interview such as recording via mobile application and the length of the interview. Each participant was asked to fill out the interview preparation questionnaire, sign the consent form, scan them, and send them back to the author. All participants signed an informed consent form and the questionnaire return rate was also a 100%. All questionnaires, notes, consent forms, and other documents were kept both electronically and in paper form in a safe locked place.

The interview process included a number of steps that began with contacting each participant by phone. Each interview was audio recorded through a mobile application called "call recorder." Interviews ranged from 50-90 minutes. Benefits of participating in the study were pointed out and the need for future research was explained. Each participant's story varied in length and content, which led to additional questions that sometimes parted from the interview guide. The only significant time interview content varied was when the researcher asked a follow up question picking up on important information from the answers of the participants.

### 3.5 Data Analysis

Thematic content inductive analytical procedures were used (Hsieh, 2005). The data was analyzed through a step by step procedure to extract themes that aided with the research aims. This began with transcribing the data. The first step was to read and highlight each transcription and to create pseudonyms for each participant to ensure anonymity. The

highlights illuminated first impressions. Step two was to provide labels for highlighted relevant portions of each transcription. The labels were phrases and sentences about actions, opinions, and concepts that arose within the interviews. The labels were narrowed down into code words that represented the idea behind the highlighted data. The coding was done only when data recurred, surprised or reminded the researcher about a theory, was explicitly stated by the participant as important, or simply because the researcher found it relevant. This aimed for a conceptualization of underlying patterns. With such a rare population within the criteria for the study, and the author belonging in that category it was established that coding was done through expertise within the field of American football. The content was analyzed by a second coder with the aim of reaching consensus during the stages of the analysis. The second coder performed his analysis independently. He then brought his notes to the author and discussed his disagreements. The author adopted all the changes suggested by the second coder. The changes were made on tittles for themes. Research bias was reduced by staying as close to the data as possible. In step three, categories were created by bringing several codes together. These categories were labeled based on keywords from the original questions in the interview guide. Two additional categories were created, because the questions did not directly address these topics. An example of a category was: defining factors, which included codes such as systematicity and preparation, which in turn recurred in several interviews. At this point many older codes were dropped due to irrelevance in the field of interest. Step three finalized the conceptualization of the data and paved room for a more abstract level of analysis. Step four was designed to find connections between the categories or themes. These connections were the main result of the study and provide new knowledge of the world from the participants' point of view. There was no need to create a hierarchy or an order of importance among the results.

### **4 RESULTS**

### 4.1 Specialization

Timing of specialization and sport involvement were one of the themes determined by the interview preparation questionnaire and interview questions. The Interview Preparation questionnaire showed that none of the participants began playing American Football before the age of 15, and that none specialized to their final paid position group before the age of 17. All participants reported participating in one to five other sports besides American Football. Among these sports were soccer, track and field, flag football, sumo wrestling, swimming, gymnastics, and Finnish baseball. Most of the participant participation in said sports happened prior to specialization in American football. All participants reported intensity for sport participation and weight training to be no higher than 50% before the age of 13. The intensity of training in both the gym and sport increased steadily from 13 onwards. Deliberate play was also evident as four participants claimed to have played multiple backyard games with friends such as pick up hockey in the winter. Three participants referred to "child's play" being a big part of their daily routine throughout their childhood; exploring the woods was an activity that was mentioned. All participants also reported having one or more siblings. Participants stated beginning practicing American football from the age of 15 to as late as 18 years. They stated specializing to their positions on the field from 17 all the way to 23 years old. All but one participant played more than one sport and one participant played up to five different sports.

## 4.2 Selection of the Sport

Choosing American football was split into three themes: Physical Toughness, Social Influence, and Media Influence. These themes indicate the biggest reasons why the participants chose to play American football instead of other sports. The reasons participants specialized to American football are important not only for the growth of the sport in Finland but also for understanding social influence, media influence, and the importance of physical and mental toughness as precursors to American football.

All participants had different stories that led to American Football, but enjoyment of full contact connected all five stories. For example Mike stated that "Football is a physical

sport which makes you test your boundaries." Mike claimed enjoying football more than baseball because of the physicality. Physical/mental toughness, and the ability to deal with physical pain were accepted as necessities in American football by all participants. "The classic example that many laugh at is whether one's hurt or injured, can you still keep playing?"-Will. According Will, the chances of getting injured in American Football are 100%. Bill stated he "liked to deliver big hits" while Mike claimed to "fit into football like a fish fits into water" and that "You had to be tough no matter who was in front of you." Social and media influences were also found to lead participants to American football. Bob claimed to have begun playing American Football because his older brother played. Mike looked up to his uncle that played; "He was somewhat like a role model and later mentor to me." Friends also had an impact on two participants as they began the sport with a group of friends, although in Bill's case those friends "stayed for a year and I don't know how to quit." The influence of the media was present as exposure to American football. Two participants (Will & Bill) reported television and video games as first exposure to the sport alongside hearsay. "It looked interesting and challenging on the screen." Some answers to why choose American football where: "I was meant to play a physical sport and baseball was not physical," -Bob, "They were looking for big guys," -Mike, and "because American football consists of hard bursts with enough time to recover." -Bob. The results show that exposure to American football within these five participants happened through social and media influences. All five participants also reported the importance of physical toughness in both choosing and playing American football. "Testing boundaries," "had to be tough," importance of being "big, strong, and fast." All these statements and the accomplishments behind these statements prove that these participants were physically willing to test their boundaries, be tough, and build their size, strength, and speed.

## 4.3 Social Factors Including Skill Development

Results show that people and associations were noted to influence the development of psychological skills in these distinguished performers. Participants reported getting different type of support from different mentors and social influences in different situations. Besides help, mentorship relationships were found to support, teach, and increase self-

belief & exposure. The perceived effects of social factors including skill development were split into six themes: family support, active learning and player development, self-belief from motivators, emotional, and Specific Mentor.

Family support in Bill's case began in early development. "My dad and my friend's dad gave us rides to practice." Mike received immediate family support encouraging football was based on him keeping his academics in order. "I was allowed to play football as long as I took care of school properly. That kept me disciplined because I wanted to play football." Family role models also influenced skill development. Bob's brothers were his support system; "I started playing by following the steps of my big brother." He claimed to talk to his brothers on the phone while playing at the university and professional levels in America. "Yeah, we talked on the phone when I called mom back in Finland."

The second theme called active learning & player development included reported, socially influenced, lessons which positively affected sport intelligence. For example, two participants described the American style of physical training as "tremendously wearing." "I learned how to balance their training (college football workouts) with additional body treatment methods in order to stay healthy and deal with the wear and tear." -Will. Optimistically, Will viewed his injury as a blessing, because he learned treatment, injury prevention and physical therapy techniques from his doctors. "That shoulder injury, in a way, was a blessing because that process taught me about rehabilitation and injury prevention." Bill claims to still learn and develop as a veteran player. He said that "At this point (career) I use a lot of what (coach) installed in the European championship before the game against Germany: if you mess up then flush it, focus solely on the next play." This quote portrayed Bills short memory as a valuable learned tool in focusing and player development. Player development through active learning was also reported by Sam: "Local College coaches came to Finland and they taught us more about football in two days than we had learned in three years. This provided more sense to the game for me. They introduced a whole new side of football." Both Will and Bob emphasized the importance of learned systematicity in American college football. "Learning systematicity has been very useful because this sport is system based. You learn to be a part of this machine by repetition and striving to do things correctly. Then you get the desired results." -Will

The third theme addressed reports of self- belief from motivators. Three out of five participants reported increased self- belief through believable motivators. "He stated his opinion in a believable fashion and that influenced me." -Will. All three made it clear that motivators had to be genuinely believable. For example one participant was told by his highly experienced line coach that he is the best line player on the team. "It was different coming from a guy who is well established and coached for Green Bay. He was a no bullshit guy, so I knew he meant it and that meant something." –Bob. Bob reported this instant and this coach to have directly increased his perceived ability. The perceived ability was reported only to increase because the coach was so highly established, and that a lower level coach could potentially not have had the same effect. Will claimed his confidence to have increased due to motivation from other people. "Without others' support I wouldn't have pursued that goal and gained the confidence. It was their influence that got me thinking and believing that it's possible. Especially (former player/coach) was really good at it." He also claimed previous athletes' results and statistics being motivators and influences to self-belief. "I saw some of the results of (another participant in this study) which was a huge motivator. If you can mention this in your study, I must say that it is extremely important to get comparisons from somewhere relatable (close to home). I could look at his results and compare which created belief, I can do it too." -Will. Self-belief was also reported to increase through exposure and networking. Distribution of highlight tapes and opportunities that arose from NFL Europe camps introduced to the participants by scouts and coaches were described as highly motivating. "My uncle was one of my mentors in my early days of Football. He drove me forward and acquired sponsorships and gym memberships. He gave me Football contacts and talked to coaches on my behalf, telling them to keep their eye on me. He also came to watch some of my games in Germany." – Mike. All but one participant mentioned the importance of exposure as a motivator and confidence builder. "Club coaches; spoke to National Team coaches who in turn sent NFL Europe information about players. I was one of those players which was highly motivating." -Bill.

Emotional support was only reported by two out of five participants in the forms of wellbeing and encouragement. The lack of emotional support was important for these participants. "In High School, college and even after I got support from my host family's

father. But sometimes he was over excited because he was (specific college) guy so he didn't always think about how I felt. My host family's mother supported my wellbeing and how to deal and survive with everything that was going on. Other than that I did not have much emotional support." –Bob. The lack of emotional support was seen by participants as a disadvantage especially playing in a foreign country. "I noticed afterwards that it's important to ask for help. Haven't always asked for enough help during my career" –Bill. Bill also formed a bond with the other Finnish guys on his team in NFL Europe, which created a support system for him. "I got to speak Finnish with them and hang out with them, it definitely made it easier emotionally, but a year later they get moved to another team." –Bill. Three out of five participants stated that they would have benefitted from emotional support especially during their time abroad. "The team was what kept me busy and going and I enjoyed being around those guys. Mike stated that "now that you ask I think I would have benefitted from a support person who knew about these things."

Finally, three out of five participants reported the lack of a specific mentor. Bill claimed to have "thought about how far he could have gotten as a football player if he did have a specific mentor or supporter." Sam said he never had an "actual mentor for football, it has always ignited from my own will." Bob also never had a specific mentor. "I did not have a motivational figure or someone specific who to break things down with, I was motivated by people not believing in me." All participants saw some form of mentorship or social influences as supportive. Mike found positive social influences through his first football team. "It began very well. We had a good mix of old and young players and the old ones advise the younger ones, while we were trying to pick up things from the older players." Will reported a specific mentor early on in his career. "I had a family friend power lifter who had suggested I play sports earlier. She was a world number three power lifter so she coached us and made us a program." Sam also reported a specific mentor who he claimed was very important to his success and him as a person. "In football there was (player/coach's) father. He was a friend, coach and a second father to me even though I had a good relationship with my real father. He became my mentor. We spent a lot of time together and he guided me and taught me specifics about American football." Bill talked about his teammates as positive social influences, but as mentioned earlier, claimed the lack of a specific mentor person. He also mentioned his national team coach having impact on

his performance. "One of my teammates helped me correct mistakes from an offensive line perspective. The head coach of the national team has pushed me. There is something scary about him in a good way. I wanted to give all I had for him, if I made a mistake I did not want to even see or talk to him."

4.4 Defining Characteristics of Professional Athletes: Psychological Characteristics Profile The players reported a number of psychological components for successful performance and their use to achieve professional status in American football. Key mental skills that were found in the data included mental toughness, self-efficacy, beliefs, emotional regulation, goal setting, a high work ethic, commitment, focus, and motivation. For example, Will talked about his mental toughness in the choices he made. "To possess mental toughness which to me is decision making, not being affected by group pressure and opinions, systematicity, order, and discipline." He also mentioned subcomponents of mental toughness. "Belief and focus are great aspect of MT, you specifically focus on your goal which means that you are systematically willing to sacrifice external factors and determined to drive towards that goal regardless of pain, because pain is temporary." Bob talked about the importance and influence of preparation on self-efficacy. "I see that the right type of preparation gives you the right tools for success and the belief in what you are trying to accomplish, then self-confidence even further feeds it all." Bill faced physical limitations early on in his career so his self-efficacy played a big role in his success: "I was smaller and weaker than everyone else so the first season was focused on my technique which led me to see myself in a brighter light." Another example stems from Sam's comments on goal setting, and the way he found goal setting useful. "Winning was like a half-way goal, then you set new goals. The goals were never big, they focused on doing the small things right." Will credited discipline and desire in his goal setting; "If you believe in something you set a goal to get there then you specifically focus on that goal regardless of temptations or physical pain as long as that pain is not detrimental."

All participants had several strategies to regulate emotions. Emotional situations such as losing were described in different ways by participants. Mike said that "losing has never really affected me, if I lost a game it didn't especially bother me." Will regulated his

emotions by viewing loss as a part of the process. "Losing is absolutely important for learned lessons, but on the other hand it doesn't matter." Sam said "I never lost, I have suffered defeat but I have never lost." Bill's claims to have improved emotion regulation when it comes to losing over the years; "Losing is b\*\*l c\*\*p, I remember those time I lost and then I cried. Little by little you learn, it sounds ridiculous to say you can learn to lose, its toleration can be more effectively filtered." Finally, Bob claimed to "hate losing and recovering from it is strenuous." He also stated that emotions have to be regulated by "building on experiences and moving forward even when it leaves a bad taste in your mouth." Specifically, as a group these professional American football players were characterized by Systematic behavior, preparation, mental toughness, repetition/practice, task/intrinsic motivation, self-induced learning, and the ambitions of the big picture.

Aspects of self- regulation, sacrifices, emotional control, competitiveness and the ability to cope also arose from the data as influences on mental states in achieving success.

All participants mentioned motivation. Bill claimed "NFLE qualifiers in Helsinki to feed his (external) motivation." Similar camps were also mentioned by Will as motivators to improve. Bob invited negativity to motivate him externally. "In all honesty I have always been a negatively winding guy. I get more out of people telling me I cannot do something." Will talked about opportunities that exist to boost external motivation: "There are real opportunities out there, people need to understand that if you're excited to train there really are opportunities to play in different university divisions and change Universities. You can do that and that in my opinion is important because it affects motivation." Intrinsic motivation was mentioned by several participants. "I lived and breathe Football and it was rough, but that only affected me in a positive way. It motivated me to think that here I am and I get to do what I love." Will talked about the role of intrinsic motivation in talent detection; "I don't believe that young talented athletes can be handpicked because everyone is different and intrinsic motivation has such a large role." Bill described his intrinsic motivation as a desire to get better; "You watch film on yourself and see the things you have always done and it has been working but then someone exploits it and breaks that code, which motivates me to improve. I cannot be satisfied with what I am doing because the weakness has been revealed."

### 4.5 Other defining characteristics of professional athletes

Will named his defining characteristic to be systematic behavior in football. He claimed that "A systematic way of thinking had developed, for example a player can follow the downs (attempts to move the ball 10 yards), but if he does not know the personnel, field position, situation, time on the clock, then he is not playing smart football." Will credited a lot of his success to this systematic awareness which he claimed "increased his level of play." Will credited systematicity, but never failed to mention how preparation directly related to it. Three other participants also mentioned preparation as a character defining characteristic. Bob talked about the importance of long term preparation in American Football. He said his strategy to this day is to have "a clear plan of action in preparation for the season, how to behave during the season and how to recover after the season." Bob claimed systematicity and preparation to go hand in hand. He said "there has to be both, you have to prepare systematicly in order to succeed." Bill pictured repetition to be his root to success. He said it helped him get noticed and when he got the chance to show coaches he claimed to "give everything in the few reps that you get."

All the participants in this study claimed hard work to be an obvious necessity towards success. More interestingly, three out of five participants returned to systematicity as a defining factor to success in American Football. Will in particular emphasized systematic behavior in talent development. He stated that "systematicity, or a planned, ordered procedure, can be used to train a certain technique or systematic behavior can be the difference between the scouts watching game film or not." More importantly systematicity helped him focus on "one thing at a time to building more difficult techniques and skills on top of the easier ones." "Systematic approach can help achieve and create a foundation that can be built upon." Will used the example of situational knowledge on the football field. "A player can follow the downs (attempts to move the ball 10 yards), but if he does not know the personnel, field position, situation, time on the clock, then he is not playing smart football." Will also stated that systematicity affected his path to play football in the US. Spontaneously distributing his highlight film, and meeting with college football coaches enabled him to get noticed and get a shot at playing college football.

Preparation was mentioned by four out of five participants as a defining factor in American football. "A clear plan of action in preparation for the season, how to behave during the season and how to recover after the season. Those are the large building blocks which can be broken down according to perception and feeling." —Bob. Preparation was also viewed to be a difference maker in defeat. "There is a huge difference in defeat when you are unprepared or if you are not as good as your opponent." Bob claimed to have played his best college games after quality preparation that included scouting his opponents, watching film, and physical treatment.

Repetition in American Football was described by Will as the quickest path to improvement, but only when done correctly. Bill claimed repetition to be one way to show what you have to offer. Bob said practicing the wrong drill, or the wrong way of repeating a move could create "bad habits." Will claimed repetition to be important not only to make moves automatic, but also to learn a few moves well, which can be used against different match ups. He clarified that one move can be denied by one opponent, but work flawlessly on another. He also said not to worry too much about how that move goes in practice, but once the move starts working through repetition it will build self-confidence. Participants stated that repetitions needed to be done with a purpose preferably against equal competition and in a competitive environment. Participants also mentioned the amount of repetitions largely increasing in the transition to College football, NFL Europe and the NFL. The difference participants mentioned between club teams in Finland and the US was not only the amount of repetition, but also the quality, purpose, and level of competition. At the same time Bill and Mike mentioned the lack of repetition during his time in NFL Europe and the NFL. Bill stated the amount of players in training camp that played the same position to have impacted how many repetitions each player got. He explained that in those cases the purpose of those repetitions was clearly to earn that spot on the roster.

Being football savvy, having sport intelligence, and being somewhat of a perfectionist were aspects that participants valued as defining factors to success. Mike described his sport intelligence as "having a great eye for the ball, the ability to learn new things fast, absorb the given information, and reacting to what I have learned." Will defined his sport intelligence as "self-sufficiency in figuring things out and making progress on things in everyday issues affected my play on the field in the way that I was quickly able to

embrace and learn things. This enabled me to close the distance, just like many others have done. I believe all successful Finnish players must have succeeded in closing the distance." Sam described himself as a perfectionist. "We had a 5-7-person friend group and we spent a lot of time at Kisahalli (sport hall) together. We went to Karate, played ping pong and then back to the gym. Some of my friends started catching up with me in the gym and that motivated me not to let them pass me. There was no way they were going to pass me." Sam also claimed to have been a perfectionist in the gym; "Everything in there was done by the code, written down, and if I couldn't succeed in my goals for the day that meant I needed rest so I would drop everything and go home to rest."

### 4.6 Winning and losing

All of the professional athletes in this study earned a roster spot on multiple different teams throughout their careers. All athletes won and lost games and learned lessons, but how they learned and what they learned was different. Sam claimed to learn more from losing games than winning games. Bill claimed to like winning more than he hates losing. He had learned this cognition through experience. He said losing was the hardest thing for him to fathom as a young player. "It would hurt so much, and the only way to ease the pain was with alcohol." He continued that his cognitions after losses as a more experienced player, focused on becoming better. In his own words he has "adopted task orientation," when losing a match up or game. Interestingly Sam stated that he has never lost a game. He went on to explain that he had suffered defeat but never lost, and that there is a big difference. He claimed to never see defeat as loss, but rather corrections he had to make with his team. All participants claimed participation in American football to teach people skills, which directly transfer to work environments.

Will stated that "there are few situations in life when you can practice teamwork, group work and everything that relates to those socially." He saw value in American Football participation beyond his athletic career. He added that poor leadership can lead to underperformance and going through the motions; that on the surface one takes the correct steps, but might lack passion. He went on to talk about the importance of mental toughness, focus and belief. Systematic perseverance and disregard of external uncontrollable factors

along with a focus on task and belief build mental toughness. This type of mental toughness made room for sacrifice regardless of temptations and physical pain for this participant. Sam mentioned his focus towards the big picture and living in the moment. His advice was to never be happy and to never give up. He referred to himself as a perfectionist with realistic goals. His motor and effort along with the lack of feeling comfortable motivated him to improve regardless of winning or losing. These were among the lessons that led these athletes to worldwide success in American football.

#### 4.7 Cultural Differences

Participants discussed the differences between American Football in Finland and in the US. In general, it was found that Finnish American football has a lack of intelligent training routines, repetition, and sport intelligence. Will stated that "in Finland, American football is reactive and underdeveloped in the sense that it lacks situational intelligence and experience that can be seen as game intellect." He claimed that "in Finland players on defense are taught to stop the attack through reaction, but advanced game intellect in America might not only stop the attack but also strip (steal) the ball." He continued, "This is a direct result of more repetition and experience through practice routines." Other participants mentioned related categories such as game speed, drills and practice structure to vastly differ within American football between the two countries. "The speed is at a different level in the states, which is probably due to the amount of participants, meaning more talent." -Bob. Bob also mentioned age of players. "We have (Finland) these 40-yearold guys showing up to games in terrible shape without training or offseason preparation. That can be dangerous or even deadly." Mike talked about the differences in repetition; "You show up (Finland) during game day and play, but over [name of place in the states] you repeated the same move hundreds of times before you even played the game." Football knowledge was reported as lacking in Finland by three out of five participants. This included the lack of football fundamentals, questioning the system's ability to develop players and a raw fact about "American college coaches being more productive in two days than Finnish coaches in years." -Sam. "The truth is that there are talented athletes, talented athletes are born in Finland who have the opportunity to play at the top level in multiple

sports, even American football. The question is if they can get a system around them that develop their performance?" –Will.

Two participants referred to the immense difference in funding for American Football between Finnish club teams and American programs, which plays a huge role in creating a well-structured program. "The reality is that funding creates opportunity, but possibilities to improve structure and systematicity exist without additional funding." — Will. Will suggested seminars hosted by current players as a step towards improvement. He said "players that have played at the NCAA college level could host seminars to educate younger athletes on possibilities and the do's and don'ts in American football." Sam suggested educating coaches to create a program oriented environment. On a positive note, visibility and opportunity to transition to other levels was found possible. "Opportunities exist for young players coming from Europe. It requires spontaneity and inspiration, but the opportunities are out there." —Will.

Two out of five participants addressed myths in American football. Three myths were busted by participants. 1) The necessity to specialize early, 2) division 1 (NCAA) athletes and NFL athletes are raised on a pedestal because they are almost superhuman, 3) people can hand pick talent at an early age. Two participants claimed these three myths as untrue. The necessity to specialize was addressed by providing examples of great American football player who has started playing at a very late age. "He played soccer and started playing special teams and linebacker in his junior year. He came to Oakland (NFL) after two years of American football. The second myth was busted by the participants' own accomplishments: "I was told I'd never make Division 1 because it is full of steroid monsters not to speak of the NFL." Yet accomplishments spoke for themselves because this participant played both Division 1 and NFL football. The final myth was addressed by a participant as an "impossibility to know early because people can develop."

### 4.8 Participant Recommendations

As the final question of the interview, athletes were asked to identify areas of recommendations for those working with American football in Finland. One recommendation was to convey as much information as possible for example by creating a

video guide to athletic talent development for Finland's American Football Association's (SAJL) website. Other recommendations are summarized below:

### Achievement strategies

- Emphasizing systematic behavior and preparation in football practices.
- Learning fast is essential for anybody transitioning from Europe to America.
- Enhancing intrinsic motivation and task oriented behavior to connect with achievement.
- Spontaneity in exposure to the next level; being proactive by talking to scouts, creating, and sharing game film.
- Although it is a team sport, at the top level you must be selfish at times because you are competing for a job against your teammates.
- Exposing yourself to elite achievers in any field. Seeing ordinary people achieve extraordinary things will make you grow.
- Finding the optimal amount of push and support. This will often change throughout career phases.
- Viewing failure as a part of the equation to success.
- Employing the mentality of wanting to win more than hating to lose.
- Being patient. Understanding football is a process and seeds through progression.

#### **Self- Motivation**

- Mental Toughness subcategories: The key to foster talent begins with an internal love and belief in the activity and psychological skills such as focus will aid the process.
- Focusing on task instead of results and outcomes.
- Task orientation leads to success which can increase self-confidence.
- Self-driven activity is necessary because support systems cannot create motivation.
- Dedicating yourself to your goals, believing in your dreams

#### **5 DISCUSSION**

The purpose of this study was to identify some important components that led five Finnish American football players to get a chance to become professionals. A reminder to the Finnish American football community that it is possible, and with the amount of gifted athletes in Finland it is probable. The question stated by Will was: "can they (young players) get a system around them that develops their performance?" This study was developed to address a need shared by other organizations, players and coaches throughout Finland. Psychological characteristics, mentorships and timing of specialization were all found to play important roles in talent development. It is important to keep in mind, however, that these are group results. No individual American football player can be described by all the identified factors because the results are gathered from multiple different top achieving athletes. It is believed that defining factors vary among different sports because not only are the necessary skills different among sports, but also the mind state and preparation vary. One commonality among all sports is that practice makes perfect. According to Cóté (2014), deliberate practice in the investment years of his developmental model of sport participation, can have probable outcomes such as elite performance, enhanced physical health, and enhanced enjoyment sport. The results of this study fall in line with that notion.

#### 5.1 Summarizing major themes and connections

The reason why participants chose American football was reported to be mentorship, lack of limitations and physical restraints, full contact, and advertisements on TV or video games. Similarly to Cóté's (2014) notion that deliberate play during investment years can have probable outcomes such as enhanced sport enjoyment the reasons for choosing football connect with the most basic defining factors; physical factors. Football was defined by a participant as a lot of fun because he was big, explosive, strong and fast, but also had enough time to recover. With a sampling background and investment years dedicated for deliberate practice, this participant described his recollection of that time as "a lot of fun." Football is unique because there are 24 second pauses after each play, allowing players to catch their breath. This is important because a player such as this participant, as a big guy,

might not be able to play another contact sport such as hockey at a high level due to physical, and game rule involving restraints. The game of American football invites players of all sizes and shapes. These players are then categorized into position groups. The reasons for choosing football also connect with mentorship. All participants were introduced or first interacted with football through a mentor of sorts. Choosing a sport in all of these cases was influenced by others opinions. It is important to note that the timing for choosing a sport. All participants chose football as teenagers through their own free will. This meant that friends and role models had a large impact on the choice. In early specialization sports such as gymnastics the choice is made at a much earlier time in life, making more room for impact on direct family members. It is important to state that only one participant used the word mentor when describing help from a person. In this case mentorship is defined as anybody who aided with the career progression of these participants.

Mentorship led to psychological lessons reported by the participants. Self-belief was reported to be directly affected by coaches and peers. One player reported to have gained the confidence to believe in his abilities to play in The US from a former player and friend. Another participant shared how his coach in NFL Europe built up his self-belief. One case revealed his coached praise to be the indicator that he was just as good as any NFL player. The connecting factor was believability. Two participants stated that the praise had to be believable and helped if it came from a respected person in the field. When asked about psychological lessons, one participant in particular brought up focus on task, self-belief, realistic goals, controlling game knowledge/awareness, and dealing with victory/loss. Many of these fall under the subcomponents of mental toughness frameworks (Jones et al., 2007). These subcomponents were described by the participants as learned psychological skills over many years. Another participant described how motivation could improve through achievement of goals. He described setting a specific goal by practicing a favorite move over and over throughout the duration of training camp. Then suddenly something clicks and the move works in a game. Similar to George T. Doran's SMART way to write management goals and objectives, this participant seemed to have used specific, measurable, assignable, realistic, time-related goals. This shows the importance of the specifics of goal setting. This type of realistic goal setting affected the participants' success

in training camp. It is well established in academic writing that goals drive behavior (Barron & Harackiewicz, 2001).

Other major findings were reported defining factors of the participants, the importance and application of various mentorship throughout careers, and psychological skills applied in top level American Football. All five participants found mentorship useful in several different ways, which directly related to each participant's defining factors to success and psychological skill application. Connaughton et al. (2008) found mentorship through parents and coaches to be essential in the early and middle phases of developing mental toughness. Epstein (1988) also found the teacher's role to influence motivation. This connection between the perceived importance of mentorship by all participants and psychological skills such as mental toughness and achievement goal theory equation for motivation reported in the interviews could have given some players the edge to excel in American Football. Reported psychological skills were mental toughness, motivation through realistic goal setting, systematicity, and preparation. This, and statements such as "wanting to win more than being scared to lose" pointed towards task-oriented mind states. Participants reported responding to failure as a learning tool, and improvement as success, which again portrayed task-oriented behavior. Two participants reported low perceived ability in the early and middle stages of their careers. Interestingly this could be a result of late specialization, but did not negatively affect the outcome of either athletes' performance progression at the time. This could be because task-oriented athletes were found to be less impacted by confidence (Elliot, 2001). Specializing late into American football automatically limits experience, which can cause low confidence in the newly learned skills. The presence of task-orientation and mental toughness could have been a factor in the transition phases of some of the participants in this study. Going into a NFL Europe camp for the first time and being behind in game knowledge because of a late start can be devastating, but task-oriented athletes will work to overcome the difference in game knowledge. Mentally tough athletes will believe, focus and develop resiliency to overcome the challenge. One other theme was found to interact with the three major categories. Choosing American football over another sport was largely due to physical defining factors with all but one participant, and secondly due to peers and mentors with all participants. Specialization of each participant was plotted on Cóté's (2009) model, and illuminates the

late specialization of all participants. Interestingly all participants began playing American football after Cóté's suggested specialization period, and specialized to their positions on the field after suggested investment years.

Defining factors to successful careers in American football were found to involve a physical and mental toughness. A mind state that disregards, but understands severity of pain, and the difference between hurting and injury. A mind state that promotes self-belief and focus through mental toughness in relation to task oriented behavior. Independent, systematic, and spontaneous behavior in social situations, self-promotion and working towards goals. Systematic behavior was reported by two participants in relation to more than one aspect of the game. A systematic approach to training an American Football skill was perceived as motivating because a systematic, repetitive, focused practice created the opportunity to fully learn the skill. This in time enabled the participant to succeed using the mastered skill motivating and increasing self-belief (a subcomponent of mental toughness). Systematic behavior in this setting connected Self-belief, motivation and focus, through two theoretical frameworks of mental toughness and achievement goal theory. Preparation happened through building blocks that begin with offseason training and end with post season recovery. Motivation was also found to come from realistic/specific goal setting, never being satisfied, hard work paying off through effort, and focusing on the big picture. The presence of people to help guide the way. Learning through experience and most of all sticking with it even when it's difficult. Focus was found to be an essential tool to deal with distractions and other barriers. Group interaction, involvement, and systematicity in football were found to have positive effects on the transitions from sport to the civil world.

#### 5.2 Study Strengths and Limitations

This investigation has many strengths. Primarily, an elite group of Finnish national athletes was surveyed and interviewed. Never before have so many Finnish national NFL experienced players been studied from a psychological perspective. This study was a platform for most successful players to share their personal experiences and views regarding development. The mere existence of studies concerning talent development in American football is debatable, not to mention concerning European origins. This study

was among the first of its kind. Another strength was the two-person collective validation method used. A broader scope was used in this investigation. The sample represented 83% of the population. Finally, the author has similar experiences as the participants, and meets the criteria for participation of this investigation. This firsthand experience aided interview processes and analysis of data.

Like all research, this study had limitations. A low number of participants struggles to predict how accurate the data is in larger populations. No comparison group of less experienced athletes were studied. Secondly, the two other athletes that fit the participation criteria, one being the author, were seen best not to participate. The seventh potential participant was not available for participation. Third, there were no more participants that fit the criteria of this study. Finally, the data was collected mostly in retrospective fashion. The study relies on accuracy of individual memories of football activity, allowing a degree of inaccuracy in memory (recall bias), especially during longer periods of time. The argument against this is that for individuals involved in competitive sport its second nature as a habit and activity. The recall periods for this study were also comparatively short with some other recall studies (e.g. Baker, Cote, & Deakin, 2006; De Vera, Ratzlaff, Doerfling, & Kopec, 2010). These were the sample limitations and should be kept in mind. The careers of the participants were influenced by various individuals and institutions, but the timing of effects must be noted and not misunderstood.

## 5.3 Recommendations for talent development

This investigation, while exploratory, has substantial implications for guiding practice, especially when combined with other research in the area. Fox example, the psychological development of talented American football players happens over a long period and is shaped by an assortment of individuals and factors. This long duration process was found to involve the talented athlete, a support system, and systematic behavior from the athlete. Short term approaches are not as effective and educating parents and coaches on the importance of their influence could prove beneficial. In addition to these general suggestions, the present study recommends 1) Psychological characteristics implications, and 2) Social influence implications for practice. It is also important to take into

consideration Bloom's (1985) stages of talent development in fostering young talent. These clear instructions directed towards parents indicate verified aspects within the current study. For example the sampling based sport histories of all participants. In other words the results are in line with Bloom's (1985) suggestions of "keeping it light, simple, informal, and valuing the child's interest."

## 5.4 Psychological Characteristics Implications

The psychological characteristics and motivational results of this study provided a good profile for mental factors defining most successful American football players from Finland. Coaches may use this profile by comparing their athletes to these components before creating a mental skills program. Each characteristic mentioned in this study can be rated, areas of improvement can be identified, and appropriate psychological skills training applied. Additionally, a number of governing bodies in the US. (USA Swimming, USA Tennis) have created listings of psychological competencies with developmental timelines throughout athletes' careers. Such listings should be applied in Finland's American Football Association (SAJL). The present findings should be mentioned in such competency listings. The psychological characteristics profile identified in this study can also be used as a recruitment tool for national team purposes or eventually on the club level. Coaches could identify talent by rating prospects on each of the attributes and narrow down to the ones that demonstrate potential. It is important to remember that no one formula is correct and the results of this study are from a group of top athletes, each with a different set of skills. Therefore, this profile should be used by coaches to better understand their athletes. As the results of this study show, psychological attributes are only a part of athletic success and physical talents are important considerations.

# 5.5 Social Influence Implications

These results have some prominent implications for athletes' mentors and social influences. First, although traditional thought and media highlights great examples of parenting children into sports early and for the purpose of developing them into top performers (e.g., The Williams sisters), this and other studies of specialization have demonstrated that

approach is not the best approach. Alternatively, the present results support Bloom's (1985) and Cóté's (1999) work and show that most football players did not start their careers with NFL aspirations. Instead, their experiences included exposure to an active lifestyle, participation in multiple sports and encouragement to participate for fun and developmental reasons. Eventually, they found the correct sport for their body type and psychological scheme and only after success in the sport did they develop professional aspirations. Early social influences were found to impact sport decision making. All participants chose football because of friends, family members and role models. When the goal was clear, it was different social influences; coaches, players, and mentors who provided the support participants needed to succeed. Programs are needed to expose large numbers of children to American football in Finland. These programs should emphasize systematic behavior through fun and fundamentals of football. Parents and coaches should be educated on how to foster talent and promote psychological development at each stage of a career in American football. Emphasis should be put on understanding the implications of support and encouragement at entry levels of American football. The pressure free importance of winning and losing early on, and the value of hard work, optimism, and belief. The use of practical advice coming from this study should be emphasized as convincing accredited evidence from people who have made it to the professional level. The long term goal was to investigate the psychological (and other) methods of talent development used by some of the all-time best American football players in Finland, and use that information to incorporate positive change in Finnish American football.

### 5.6 Conclusion

The results of the present study have shown that these NFL experienced athletes were characterized by multiple important psychological characteristics. This gives us a good idea of the psychological characteristics of a professional American football player. It must be kept in mind that these are group results, therefore no one player is characterized by all the identified factors. Each participant was unique in the combination of factors affecting their psychological construct. This investigation also suggests that psychological talent development should be considered a complicated system made up of an assortment of

influencing factors. If one is to succeed at this long term process, proper nurturing is required through a support system. The amount of influences through individuals and agencies can vastly vary. Those influences can affect directly, by teaching or providing exposure, or indirectly through modeling. Specialization must not be forced, and should happen naturally depending on the aspirations of the athlete. Late specialization in American football is recommendable to most position groups. American football participation early on should focus on fundamentals and having fun in an encouraging, optimistic environment. According to these athletes, systematic preparation will act to make the desirable happen more often, paving way for acquiring high abilities.

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#### **APPENDICES**

## Appendix 1

#### Interview Guide

**Sporting Background** 

Which fundamentals are important to your practice routines?

What makes you good at fundamentals of football?

Relationship with coaches. Elaborate on the importance of the coaches in your athletic career. Is there anyone that has made a big impact on you and why?

Football History

Walk us through your football story.

What led you to choose American football?

#### Career Events

Describe any/all career defining moments/Highlights during your athletic career. What are some proud moments, recognitions, or accomplishments that made you the player you are? What are some difficult moments during your athletic career? Injuries, tough opponents, handling adversity.

- Describe how you overcame adversity during tough times.

Are there any barriers that were hard to overcome during your athletic career? If so what are they?

Ex. Motivational, anxiety, financial, bureaucracy, personal, physical.

# Psychology

What defines you as an athlete? Ex. Skills, talent, hard work, enjoyment.

What are defining factors to your success?

Any outside leadership/Help/motivation? Ex. Relatives, peers, partners.

How do you feel about working hard in sports?

How do you feel about losing?

What does winning mean to you?

What are some of the most important lessons you have learned during your athletic career.

In what situations did they happen? Did you lose or win that game/situation? What does that situation mean to you?

Have you ever lost a game and felt happy about it? Elaborate.

Narrowing down to your success as an athlete, in your own words describe how you got that far.

Talk us through your NFL experience. Time, Length, Feelings, Competition, Memories, etc.

Appendix 2

Interview preparation questions

Name:

Position in Am. Football:

Date of birth:

Telephone #:

Email address:

Occupation:

Family History

How many parents were present in your childhood? Biological, step-parents?

How many siblings?

Are you oldest, youngest, middle or only child?

How well off was your family during your childhood? Upper, middle, or lower class?

On a scale of 1-10, how competitive are you?

Please list any awards/recognition you have received during your athletic career. Be sure to include the name of the award, the year it was received, and the sport related to the award.

Please list all Sport/athletics related organizations in which you have held membership at some point in your athletic career. Begin by listing all sports played as a child and continue through to your current situation. Include the years of participation and any names of organizations.

When did you start lifting weights and working out outside of your main sport? On a scale from 1-10 (1 being low intensity 10 being maximum intensity) starting from age 7, jot down how intense your training outside of your main sport was/is: Age:

7. 8. 9. 10. 11. 12. 13. 14. 15. 16. 17. 18.

19. 20. 21. 22. 23. 24. 25. 26. 27. 28. 29. 30.

Now:

Now do the same for intensity of American Football specific training:

Age:

7. 8. 9. 10. 11. 12. 13. 14. 15. 16. 17. 18.

19. 20. 21. 22. 23. 24. 25. 26. 27. 28. 29. 30.

Now:

Did/Do you play multiple positions in football? Which ones?

When did you first hear/learn about American Football?

When did you first throw a Football?

When did you first put on Football pads? What team?

When did you first get time on the football field? What team?

Did you ever attend training camps or minicamps? When and where?

When did you earn a starting Job on the football field? What team?

When did you first get selected to play for the National Team?

When did you first get international football experience? Team? Country? Starter/Non-

Starter?

When were you in the NFL?