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THE SMALL-TOWN NFL PLAYER

BY


BODENE BLARE PINZ

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THE SMALL-TOWN NFL PLAYER

BY

BODENE BLARE PINZ

Submitted to the Faculty of the Graduate School of
Eastern Kentucky University
in partial fulfillment of the requirements for the degree of

MASTER OF SCIENCE

2019

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DEDICATION

This is dedicated to all of the small-town athletes.

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I would first like to thank my thesis committee for all their support and guidance throughout this process. Dr. Cormier, thank you for your input and guidance. Dr. Sciascia, thank you for all your statistical expertise. Dr. Adams-Blair, thank you for your continued encouragement and support. I would also like to thank my parents and family for their never-ending love and support. Thank you to all my friends for their helpful suggestions, listening to my venting, and reminding me to enjoy the process.

ABSTRACT

Introduction: Several studies have predicted the odds ratio of becoming an elite or professional player based on an athlete's hometown. The research is evident that a player from a smaller town has better odds of making it to the elite level of sport compared to a player from a large urban city. Where an athlete is raised is important in understanding how they were introduced to football and how they developed their skills. Using the United States Census Bureau and Office of Management and Budget definition and city breakdowns for this study, small-towns are defined as an area with a population of 50,000 or less. The purpose of this study was to find what percentage of NFL players play and are from a small-town. By asking four questions: (a) How many NFL players are from a small-town (population of 50,000 or less), (b) Do small-town players play specific positions, (c) Do certain teams sign more small-town players than others, and (d) How many small-town players start? **Methods:** A total of 2,103 NFL players from the 2018 rosters of 32 teams were analyzed. Data was collected from Pro Football Reference and NFL.com. Variables gathered were: team, conference, starting status, position, hometown, university, university division and subdivision. The population of each players hometown was collected from the U.S. Census Bureau. Descriptive statistics were calculated for all the variables and 2 x 2 contingency tables were constructed for each comparison. A binary logistic regression was utilized to calculate odds ratios for city size and starting status in the NFL i.e. starter versus non-starter. **Results:** A large group of the 2018 NFL players were from a small-town; 38.14% of the players were from a town of less than 50,000 people. Small-town players were not

found to play any specific positions, rather they played all positions. The Kansas City Chiefs had the highest number of small-town players on their team at exactly 50%. The average amount of small-town players on each team was 36.05%. Small-town players were found to be 25% more likely to start than players from populations greater than 50,000 ($p=0.02$, 95% C.I. = 0.661, 0.966). **Conclusion:** This study found that not only do small-town players make up 38.14% of the total NFL players and play all positions but they also have a 25% greater chance of starting and playing. A strong support system, informal sport structure, and the “big fish in a little pond” effect are thought to be the reason for small-town athletes to have strong work ethic, commitment, and enjoyment for the sport.

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Chapter I: Introduction

The purpose of this study was to find the prevalence of the National Football League (NFL) players who were from a “small-town and if they play. According to World Atlas (2017) a town is an unincorporated community with a small geographic area; whereas a city has a diverse and high population density with permanency and a large geographic area. This study defined three types of towns or cities: small-town, rural area, and urban city. A rural area has a population of less than 10,000. A small-town as having a population between 10,000 and 50,000. While, an urban city has more than 50,000 people in population. The NFL is the elite level of football and very few people who play football will ever make it to that level of play. Nonetheless, as much research has been established, the odds of making it into the elite levels of sport are better for a player from a community or town with a population between 50,000 and 100,000 than those of a player from an urban city with a population of more than 100,000 (Côte, MacDonald, Baker, & Abernathy, 2006). These results have been echoed in many sports: Canadian and America hockey, basketball, baseball, and golf (Côte, MacDonald, Baker, & Abernathy, 2006). The odds may be in favor of an athlete from a relatively small-town however, the question is how many current NFL players are truly from a *small-town*?

There is significant importance in gaining a better understanding of the demographics of the players in the NFL. Coaches, universities, and athletes alike would know where the professional athletes are coming from and how to look for the best

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athletes. Athletes from small-towns would know not only the odds are in their favor of making it to elite level of their sport but would know how many current NFL players grew up in similarly sized cities and towns. Coaches may learn that they should expand their recruiting areas to look at smaller towns rather than big cities for their potential recruits as well as knowing if there are certain variables, such as specific positions, that are more likely from a small-town player to earn or hold.

Delimitations of this study included the number of teams and players included in the analysis. Another delimitation was that a player may have moved during their childhood and their place of development may be different than the area they refer to as their hometown. Or, one may have stated the closest urban city or more popular town as their hometown rather than an unknown or small-town. The availability and accuracy of the information provided on each team's specific roster was the biggest limitations for this study. The reliability and validity of the information provided on the rosters could not be completely controlled. Nonetheless, for this study it was assumed the listed hometowns were correct and referred to the place of development for each athlete.

Coakley (2007) defines two types of sport structures: informal and formal. These structures are dependent of the environment and population involved in sport. The social psychological climate is important in created in motivational and empathic environment for a sport participant to enjoy the sport. Enjoyment leads to commitment and commitment to sport important for athletes as most professional athletes play one

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sport for many years. The cost of participation can be very expensive and along with population of a town, a socioeconomic status can become a factor in one's ability to continue to play. Each of these factors are related the environment and the development of an athlete.

Of the eligible NCAA college football players, 1.9% made it into the NFL in 2017 (NCAA, 2018). With such a small amount making it into the elite levels of football each year, how can the likelihood of success be determined? The birthdate and cutoff age of sports leagues has been found to correlate with success in many sports (MacDonald, Cheung, Côte, & Abernathy, 2009): soccer (Barnsley, Thompson, & Legault, 1992; Dudink, 1994; Helsen, Starkes, & Van Winckel, 1998; Musch & Hay, 1999; Verhulst, 1992), baseball (Daniel & Janssen, 1987; Grondin & Koren, 2000; Thompson, Barnsley, & Stebelsky, 1991), hockey (Baker & Logan, 2007; Côte, MacDonald, Baker, & Abernathy, 2006; Sherar, Bruner, Munroe-Chandler, & Baxter-Jones, 2007), golf, and basketball (Côte, MacDonald, Baker, & Abernathy, 2006). It has also been found that for Canadian and American hockey, basketball, baseball, and golf the odds of making it into the elite levels of these sports are better for athletes from cities of populations between 50,000 and 100,000 (Côte et al., 2006). With youth sport participation on the rise and the positive affects participation has on youth development, it is important to understand how athletes are developing and how it correlates to later success at elite levels (NFHS, 2018).

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The environment a child develops in is very significant in their development as an athlete. Small and large sporting organization environments have different sport structures that encourage different characteristics and playing structures among participants (Coakley, 2007). These structures facilitate a psychosocial environment that can encourage or inhibit commitment and development of athletes (Côte et al., 2006; Hall et al., 2017; Newton, Fry, Watson, Gano-Overway, Kim, Magyar, & Guivernau, 2007; Seifriz, Duda, & Chi, 1992). Commitment and participation in a sport can be expensive and the ability to pay for specialization and extra training can be a strain for parents with lower socioeconomic resources (Allison, Davis, & Barranco, 2018; Coakley, 2007; Eitle, 2005).

While there has been research done on where professionals grow up and the likelihood of making it to the elite level of their sport, little to no research has been done on how many current NFL players are from specific populations. This is important as, recruiters from both professional and university teams should look to small-towns for their athletes if the majority of NFL players are from smaller towns and communities.

This study aimed to determine the relevancy of the previous knowledge that an athlete from a “small-town” has better odds of making it to the elite level in their sport - to show if small-town athletes do make it to the NFL more than an athlete from an urban city. Also, what variables, if any, effect that frequency? This study looked specifically at the following variables: NFL conference, position, offense versus defense, hometown, university, and university division and subdivision. By asking four questions:

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(a) How many NFL players are from a small-town (population of 50,000 or less), (b) Do small-town players play specific positions, (c) Do certain teams sign more small-town players than others, and (d) How many small-town players start? It was the primary intent of this study to determine how many athletes from small-towns were prevalent in the NFL and if they were actively playing. The secondary intent was to find if the small-town athletes are more susceptible to a specific position, conference, or another specificity.

Chapter II. Literature Review

In 2017, 5.22 million children age six and older participated in tackle football in the United States (Statista, 2018). Across the nation, in 2018, there were a total of 1,057,382 reported high school football players. Of the high school football participants, 6.9% (73,063) participated in NCAA DI, DII, and DIII sanctioned football (NCAA, 2017). That number gets even smaller when considering how many college football players move on to compete at the professional level. Of the 73,063 NCAA football players in 2017, 16,236 were eligible for the draft, and only 253 of them were drafted. That equates to 1.6% of eligible players drafted into the National Football League (NFL) and a total of 1.9% of the eligible players were drafted into the professional setting including Arena Football League (AFL), Canadian Football League (CFL), and the NFL (NCAA, 2018). The chances of making it into the NFL or any professional football league are not good for high school athletes. Nonetheless, children continue to participate in all levels of football.

It has been known that “when” an athlete is born has a great effect on their likelihood of playing at an elite level in sports. An athlete’s birthdate has been found to affect their success in several sports (MacDonald, Cheung, Côte, & Abernathy, 2009): soccer (Barnsley, Thompson, & Legault, 1992; Dudink, 1994; Helsen, Starkes, & Van Winckel, 1998; Musch & Hay, 1999; Verhulst, 1992), baseball (Daniel & Janssen, 1987; Grondin & Koren, 2000; Thompson, Barnsley, & Stebelsky, 1991), hockey (Baker &

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Logan, 2007; Côte, MacDonald, Baker, & Abernathy, 2006; Sherar, Bruner, Munroe-Chandler, & Baxter-Jones, 2007), golf, and basketball (Côte et al., 2006). Those who are older than their peers due to the cut-off date of their sport leagues, often have more of an advantage to represent on elite teams and continue to play at higher levels (Côte et al., 2006; Curtis & Birch, 1987; Gladwell, 2008; MacDonald et al., 2009).

Malcolm Gladwell (2008) stated:

It makes a difference where and when we grew up. The culture we belong to and the legacies passed down by our forebears shape the patterns of our achievement in ways we cannot begin to imagine. It's not enough to ask what successful people are like, in other words. It is only by asking where they are *from* that we can unravel, the logic behind who succeeds and who doesn't. (p. 19).

Côte, MacDonald, Baker, and Abernathy (2006) found for athletes in Canadian and America hockey, basketball, baseball, and golf the best odds of making it to the elite level were those athletes from cities with populations between 50,000 and 100,000. Whereas, athletes born in cities with populations greater than 500,000 were said to be disadvantaged compared to their peers from smaller cities for making it to elite levels in their respective sports. MacDonald, Cheung, Côte, and Abernathy (2009) found similar results in an under-representation of NFL players from cities over 500,000 and an over-representation of players from cities smaller than 500,000.

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Numerous studies have examined the odds ratio for an athlete to make it to the elite or professional level of their sport based on the size of the athlete's hometown. The research is evident that a player from a smaller town has better odds of making it to the elite level of sport compared to a player from a large urban city (Côte et al., 2006; MacDonald et al., 2009). Regardless of the odds, this study looks to answer the question: how much does population size effect the likelihood of an athlete making it into the NFL? If the odds ratio is in favor of small-town athletes, we look to see how many small-town athletes make it to the elite level.

The importance of the area in which an athlete is raised and the effects their hometown has on their development will be explained by first differentiating rural versus urban areas. Then, describing youth sport participation by explaining formal and informal sport structures, social psychological climates, commitment, and the cost of participation. Justifying the theory that where an athlete is raised effects their probability and ability to play at the professional level.

Rural versus Urban Cities

It is important to first explain the difference between rural and urban cities as definitions differentiate among sources (USDA, 2018). The United States Census Bureau has developed and defined two types of urban areas: urbanized areas and urban clusters. Urbanized areas consist of 50,000 or more people while, urban clusters consist of more than 2,500 people but less than 50,000 people. The U. S. Census Bureau does not define "rural". The Office of Management and Budget (OMB) differentiates counties

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as metropolitan, micropolitan, or neither. A metropolitan area encompasses a population of 50,000 or more. A micropolitan holds between 10,000 and 49,999 people. Counties and areas with a population less than 10,000 are considered non-metro or rural areas (HRSA, 2018). To continue urban areas will be referred to as urban or larger cities and town. While, urban clusters, rural areas or micropolitan areas will be referred to as small-towns or rural cities and towns.

World Atlas (2017) a town is an unincorporated community with a small geographic area; whereas a city has a diverse and high population density with permanency and a large geographic area. This study defines three types of towns or cities: rural area, small-town, and urban city. A rural area has a population of less than 10,000. While, a small-town as having a population between 10,000 and 50,000. An urban city has more than 50,000 people in population.

Gladwell (2008) stated, "Their success was not just of their own making. It was a product of the world which they grew up" (p. 67). It has been suggested that youth sport development can be affected across city sizes and environmental factors (Kyttä, 2002; MacDonald et al., 2009). Children in larger or urban cities have potential access to arenas, specialized coaching, and other specialized resources. Urban athletes have access to more structured sport settings with opponents, teammates, and coaches within the same skill level, age, and size (Côte, Baker, & Abernathy, 2003). However, Kyttä (2002) found youth in larger cities had less access to facilities and environmental support compared to youth in smaller cities. As Curtis and Birch (1987) found, "top

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hockey players were more likely to come from communities large enough to build rinks, but not so large that the demand for ice time outweighs the opportunities to skate” (p. 239). The need to compete for time in a gym, arena, field, or rink can greatly affect an athlete’s development. Athletes in smaller cities are introduced to sports and develop as athletes differently because they tend to play with older children and adults resulting in varied player sizes and abilities in a single game (Côte et al., 2003; Côte et al., 2006; Soberlak & Côte, 2003). Carlson (1988) suggested athletes from small-towns had unlimited opportunities to participate in sports compared to those from larger cities.

Youth Sport Participation

Cristiano Ronaldo, LeBron James, and Tiger Woods are among the top 10 on the list of the most famous athletes in the world (Schwartz, 2018). Even those who do not participate or watch professional soccer, basketball, or golf will likely recognize these names. Competitive sports and professional/elite athletes have become a valued part of today’s culture. As children and parents see famous athletes on television with their wealth and fame, children begin to idol the athletes and want to be like them in any way they can. Therefore, they turn to youth sports that are modeled after professional sports. Consequently, children join a team or play a pick-up game in the park with their friends to be more like the people they see on TV (Coakley, 2007). Further, it is believed that the youth in smaller cities who have the opportunity to interact with local high-level teams and athletes may have more visible and effective role models and motivation to excel throughout their development and participation in sports, more so

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than children from larger cities (MacDonald et al., 2009; Martindale, Collins, & Daubney, 2005). Even though, children may begin sport participation based on who and what they see in the media, the positive affects sport participation has on youth are endless.

It has been found that youth sport participation is associated with increased personal development (Côte, Strachan, & Fraser-Thomas, 2008; Hall, Newland, Newton, Podlog, & Baucom, 2017), academic success (Hall et al., 2017; Marsh & Kleitman, 2003), lower depressive symptoms and lower perceived stress (Hall et al., 2017; Jewett, Sabiston, Brunet, O'Loughlin, Scarapicchia, & O'Loughlin, 2014), and the formation of close relationships, problem solving abilities, perceptions of self-worth, and development and maintenance of social support (Carnegie, 1995; Hall et al., 2017). However, is the development of youth and their participation in sports effected by the size of town they grew up in?

Formal versus informal. Coakley (2007) identified two forms of sport organization structures: formal and informal. Formally organized sports are usually adult-controlled and have established rules, roles, positions, and schedules. Formal sports teach children how to manage relationships with adults and follow rules. Children learn structure, rule-governed teamwork, and stability. Informally organized sports are action centered and player controlled. Informal sports usually take place in backyards, playgrounds, parks, or vacant lots. Participation in informal sports require creativity, organization, negotiation, decision making, improvisation, and interpersonal skills. Children must learn important lessons in “how to organize games, form teams,

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cooperate with peers, develop rules, and take responsibility for following and enforcing rules” (Coakley, 2007, p. 137). International soccer star, Brandi Chastain (2004) explained how informal sports are unique and children are more likely to develop a love for a sport when “they dictate the place, the time, the rules, and the structure – or lack of it in their play” (p. 125; Coakley, 2007, p. 137). Small-towns and communities foster informal sport structures where urban cities foster the need for more scheduled and established formal sport structures.

Intimate and informal environments such as those in small cities and towns, may facilitate elite sport performance and achievement during early development with a supportive and facilitative psychosocial environment (Côte et al., 2006). The social psychological climate is multidimensional and is created through the behaviors and interpersonal interactions between people. Research in this area has focused on two types of climates: the motivational climate and the caring climate (Hall et al., 2017; Newton, Fry, Watson, Gano-Overway, Kim, Magyar, & Guivernau, 2007; Seifriz, Duda, & Chi, 1992).

Social psychological environment. The motivational climate focuses on the achievement goal theory and involves ego- and task-oriented motivations. This theory is based off the idea that a player’s goal-directed behavior is influenced directly by the coach or leader’s evaluative structure and judgements. The motivational climate is highly researched within sport settings. The other aspect of the social psychological climate is the caring climate. This involves both social and emotional elements within a

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setting and is particularly important in youth sports (Hall et al., 2017). Fry and Gano-Overway (2010) found youth were more likely to maintain their participation in sport when they perceived a team environment as empathizing kindness and respect between both adults and youth. Thus, creating a positive association between the caring climate and youth sport commitment. A prime example of a caring climate is Norwich, Vermont, a town with a population just over 3,000 that has three Olympic medals and has produced 11 Olympic athletes, placing one athlete in all but one of the United States Winter Olympic teams since 1984 (Crouse, 2018). Crouse (2018) explained the “secret” to Norwich’s success in raising Olympic level athletes: “...The parents of Norwich learned through trial and error the best methods of nourishing happy athletes; by valuing participation and sportsmanship, and stressing fun, community, and self-improvement” (p. 25). The people of Norwich focus on creating a caring climate to raise the youth in their community and in turn, shape their development and commitment to sport, often leading to elite success. Norwich is a model for a small-town with elite athletic success.

Gladwell (2008) expressed the importance of society in creating a support system for youth athletes whether they are successful or not:

We are too much in awe of those who succeed and far too dismissive of those who fail. And, most of all, we become much too passive. We overlook just how large a role we play – and by “we” I mean society – in determining who makes it and who doesn’t. (p. 32-33).

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In a survey of parents of middle and high school age children, done by the NPR, Robert Wood Johnson Foundation, and Harvard T.H. Chan School of Public Health (2015), 76% of parents encourage their children to play sports and 26% of parents hope their child becomes a professional athlete. Yet, according to the NCAA (2017), the sport with the highest probability of continued participation past the high school level and on into the NCAA for men is lacrosse (12.4%) and for women is ice hockey (24.5%). In other sports, the probability to continue participation past high school is as little as 2.9% (men's wrestling) and 3.8% (women's basketball). The odds are not in favor of the parents or children to continue competitive sports past high school. Despite these statistics, for the last 29 consecutive years participation in high school sports has increased (NFHS, 2018). This constant increase is indicative of the commitment children have to participation.

Commitment. Many factors are involved in why children remain committed to participation in sport. A linear relationship has been identified between increased sport enjoyment, personal investments, social support, and valuable opportunities created by participation in sport and one's commitment to that sport (Hall et al., 2017; Scanlan, Russell, Scanlan, Klunchoo, & Chow, 2013). For children, timing and location factors involved in the initial exposure to a sport are believed to affect their commitment and persistence in a sport, as well as, their chances of playing at the highest level of the sport (Côte, Baker, & Abernathy, 2007; MacDonald et al., 2009). It has been suggested that the natural, spacious, safe, and less structured environment of a smaller town may

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enable varied types of sport involvement along with longer hours of involvement at a young age, which has been associated with later investment and commitment in sport (Baker, Côte, & Abernathy, 2003; Côte et al., 2006; Soberlak & Côte, 2003). Research has shown that sport participation in small school settings has greater impacts on socialization, popularity, and self-esteem development compared to other settings (Pilling, 2003). Small-towns and schools have been found to provide individuals with more social support, higher self-efficacy, and less conflict with others when compared to larger cities (Côte et al., 2006; Elgar, Arlett, & Groves, 2003). Allison, Davis, and Barranco (2018) believe “hometowns shape elite football participation via opportunity and aspiration mechanisms” (p. 617). With commitment to a sport comes many costs associated with continued playing.

Cost of participation. It has been explained that the benefits gained from sports participation are boundless, however, participation comes at a cost. Allison, Davis, and Barranco (2018) stated not only does it take commitment and persistence to be successful but resources and opportunity, as well, for one to make it to the highest levels of their sport. As Gladwell (2008) explained the general rule of success is that it takes 10,000 hours of practice to become an expert in anything. Whether it be sports, music, or computer programming, to become an expert you must put in 10,000 hours of practice. Not only does that amount of practice require a large time commitment but there is also a price tag associated with that amount of practice and for some, specialized training.

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Specialization is a growing phenomenon in youth sports. Jayanthi, Pinkham, Dugas, Patrick, and LaBella (2012) define sport specialization as “intense, year-round training in a single sport with the exclusion of other sports” (p. 252). However, literature varies on the benefits and risk factors of specialization. A survey of 376 Football Bowl Subdivision (FBS) athletes asked about specialization, it was found that 83% of college athletes participated in several sports concurrently and their first sporting experience was in a different sport than the one they played in college (Hughes, 2018; Malina, 2009). Collins, Gould, Lauer, and Chung (2009) interviewed ten high school football coaches who were finalists for the National Football League “Coach of the Year Program”. The coaches believed multi-sport participation was important in high school. Due to the enhanced athleticism, maximized involvement, enhanced discipline they saw in their students and players. Negative factors such as burnout, drop out, and higher risk of injury are possible with specialization (Jayanthi, Pinkham, Dugas, Patrick, & LaBella, 2012).

Participation fees, travel expenses, equipment, coaches, and training sessions all add up and when a parent cannot or will not pay for the added costs that come with specializing in a sport, they are looked at as “bad” parents. There is a difference seen in income between urban and suburban settings and the amount of playing time, equipment, quality, and support given to athletes (Coakley, 2007). Allison, Davis, and Barranco (2018) argue “hometown socioeconomic and demographic indicators roughly measure structural and cultural factors related to sports participation, including sports

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infrastructure, familial financial resources, and familial and community support for aspirations to elite sport” (p. 616). Taking in to account that not only the city size but the social class of the family can also affect a child’s sport participation and specialization. Compared to peers who did not play sports, it was found that high school football players had fewer family and socioeconomic resources (Allison et al., 2018; Eitle, 2005).

Conclusion

Several studies have predicted the odds ratio of becoming an elite or professional player based on an athlete’s hometown. The research is evident that a player from a smaller town has better odds of making it to the elite level of sport compared to a player from a large urban city (Côte et al., 2006; MacDonald et al., 2009). An athlete’s development is affected by the organizational structure (formal versus informal) of their sport and the motivational climate where they were raised; each of which have been shown to differ based on the size of their hometown as well as, the level of commitment and cost of participation in the sport of their choosing.

This study examined the relationships of an athlete’s hometown population and their likelihood of making it into the NFL. Where an athlete is raised is important in understanding how they were introduced to football and how they developed their skills. Using the United States Census Bureau and Office of Management and Budget definition and city breakdowns for this study, small-towns are defined as an area with a population of 50,000 or less. While, participation, development, commitment,

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specialization, and motivational climate are all linked to the environment in which an athlete grows up and plays. The purpose of this study was to find what percentage of NFL players are from a small-town and if they play.

Chapter III. Methods

Participants

A total of 2,103 male football players were included in this study and evaluated from the combined 32 NFL team rosters. Teams and players from the 2018 rosters were evaluated. Players were excluded if their hometown was outside of the United States and players with missing information were not combined in the final data analysis. Each player's hometown, starting status, position, and college or university was collected from the NFL official team website. The population of the specific hometowns was gained from the 2010 United States Census Bureau database.

Participants were identified for their inclusion as they appeared on an NFL team roster. All 32 teams were analyzed in this study to get a true statistic of the league as a whole. There was no need to recruit participants as all information was obtained from public websites.

Procedure

Data was collected from each team's 2018 roster listed on Pro Football Reference (<https://www.pro-football-reference.com/teams/>) and NFL.com (<http://www.nfl.com/players/search?category=team&playerType=current>). The information was then separated into the following variables: team, NFL conference, starting status, position, offense, defense, or special teams, hometown, and university. The university was subdivided into division and subdivisions, when applicable. The

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population of each player's hometown was collected from the U.S. Census Bureau.

University division and subdivision classifications were found on the specific university information page.

The NFL conferences of each player were recorded based on the NFL roster team they were listed under. The NFL conferences included: American Football Conference (AFC) East, AFC North, AFC South, AFC West, National Football Conference (NFC) West, NFC East, NFC North, and NFC South. Players were classified as offense, defense, or special teams and their specific position was logged. Defensive positions included: cornerback, defensive back, defensive end, defensive line, defensive tackle, linebacker, nose tackle, and safety. Offensive positions: center, fullback, halfback, offensive guard, offensive line, offensive tackle, quarterback, running back, tight end, and wide receiver. Special teams' positions were kicker, long snapper, and punter. University divisions were classified as Division I (DI), Division II (DII), Division III (DIII), National Association of Intercollegiate Athletics (NAIA), junior college (JUCO), and community college (CC). Division I university subdivisions were Football Bowl Subdivision (FBS) and Football Championship Subdivision (FCS).

The hometown populations were broken down into eight distribution groups: less than 50,000, 50,001 to 99,999, 100,000 to 249,999, 250,000 to 499,999, 500,000 to 999,999, 1,000,000 to 2,499,999, 2,500,000 to 4,999,999, and greater than 5,000,000 (MacDonald et al., 2009). Populations less than 50,000 were considered a small-town.

Statistical Analysis

Descriptive statistics were calculated for all variables. Means and standard deviations were calculated for continuous variables while frequencies and percentages were calculated for categorical variables. 2 x 2 contingency tables were constructed for each comparison. Pearson chi-square statistics were performed to assess goodness-of-fit comparing the 2004 roster data of MacDonald, Cheung, Côte, and Abernathy (2009) to the current data set. A binary logistic regression was utilized to calculate odds ratios for city size and starting status in the NFL i.e. starter versus non-starter. Regressions were performed for city size less than 50,000 people (yes or no) and starting status (yes or no) as well as for each city size category. Alpha was set apriori as $p \leq 0.05$. All statistical calculations were performed using STATA SE 15.1 (STATA Corp, College Station, TX).

Chapter IV. Results

A total of 2,103 National Football League players from the 2018 rosters of 32 teams were analyzed. Of these players, 2,094 players reported attending universities and colleges in the United States. As Table I shows, 95.5% (n=2000) of the 2018 NFL roster attended Division I universities. Table II shows the dispersal of players who played within each subdivision (90.8% attended only FBS schools and 9.3% attended FCS). There were seven players who played in both the FBS and FCS subdivisions: five that moved from the FBS to FCS and two that moved from the FCS to the FBS.

Table-I: University Division Distribution

Division	% of NFL	Frequency
Division I	95.51	2000
Division II	3.1	65
Division III	0.43	9
NAIA	0.14	3
Junior College	0.05	1
Community College	0.05	1
DI drop	0.24	5
Move up to DI	0.33	7
Move up but not to DI	0.14	3
Total		2094
<i>Abbreviations:</i> NAIA = National Association of Intercollegiate Athletics, FBS = Football Bowl Subdivision, FCS = Football Championship Subdivision.		

Table-II: University Subdivision Distribution

Subdivision	% of NFL	Frequency
FBS	90.65	1822
FCS	9	181
FBS move to FCS	0.25	5
FCS move to FBS	0.1	2
Total		2010

The population summary for each player’s hometown has been provided in Table III. Due to a lack of hometown information provided or a hometown being located outside of the United States, 118 players were not included in the hometown data. Of the 1,985 players with reported hometowns, 38.14% (n=757) were from a small-town. The next highest amount of NFL players had a hometown with a population between 100,000 and 249,999 (15.82%; n=314). Only three out of the 1,985 (0.15%) NFL players had a hometown population of more than 5,000,000. A goodness-of-fit comparing the 2004 roster data of (MacDonald et al., 2009) to the current data set showed there were no differences between population levels or percentage of players within each level (p=0.229).

Table-III: Hometown Population Summary

City/Town Size	% of NFL	Frequency
0 – 50,000	38.14	757
50,001 – 99,999	13.6	270
100,000 – 249,999	15.82	314
250,000 – 499,999	15.21	302
500,000 – 999,999	8.87	176
1,000,000 – 2,499,999	5.79	115
2,500,000 – 4,999,999	2.41	48
5,000,000 +	0.15	3
Total		1985

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Table IV shows the distribution of the population by sets of 10,000 people of the 757 players from small-towns. Many of the small-town players (38.14%) were from hometowns with a population between 0 and 9,999, also known as a rural area. Players from rural areas accounted for 12.8% of total NFL players (n=1985), more than the combined total of players from a population of more than 1,000,000, as seen above in Table III. The frequency of NFL players decreased as the population increased from 0 to 50,000 in increments of 10,000.

Table-IV: Small-Town Population Distribution

Small-Town Size	% of Small-Town NFL Players	Frequency	% of Total NFL Players
0 - 9,999	33.55	254	12.80
10,000 - 19,999	25.10	190	9.57
20,000 - 29,999	18.63	141	7.10
30,000 - 39,999	13.61	103	5.19
40,000 - 50,000	9.11	69	3.48
Total		757	1985

Table V shows the percentage of players on each team from the respective population groups. The Kansas City Chiefs recorded the most small-town players out of the 32 teams, as 50% of their team reported a hometown with a population of less than 50,000. The Oakland Raiders had the lowest number with 23.38% of their team from a small-town. The Oakland Raiders had the same number of small-town players (from a hometown population of 50,000 or less) as they did players from a hometown with a population between 250,000 and 499,999. The average amount of small-town players on each team was 36.05%. Small-town players make up the majority of each of the 32 teams regarding the other population groups. The next highest distribution among

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population groups across most teams were players from a hometown population range of 100,000 to 249,999 (14.87%).

Table-V: Population Distribution of the 32 NFL Teams (reported as percentages)

Team	Number of Players	City Size								No Hometown
		0 – 50,000	50,001 – 99,999	100,000 – 249,999	250,000 – 499,999	500,000 – 999,999	1,000,000 – 2,499,999	2,500,000 – 4,999,999	5,000,000 +	
Kansas City Chiefs	62	50.00	11.29	16.13	4.84	6.45	3.23	3.23		4.84
Washington Redskins	77	46.75	7.79	15.58	15.58	6.49	5.19	1.30		1.30
Chicago Bears	56	42.86	8.93	12.50	16.07	14.29	3.57			1.79
Tennessee Titans	63	41.27	9.52	4.76	14.29	11.11	9.52	6.35		3.17
Pittsburgh Steelers	56	41.07	12.50	14.29	17.89	5.36	1.79			7.14
Houston Texans	64	40.63	9.38	9.38	17.19	12.50	4.69			6.25
Seattle Seahawks	62	40.32	6.45	11.29	20.97	3.23	6.45	3.23		8.06
New York Jets	68	39.71	8.82	20.59	11.76	2.94	7.35			8.82
Arizona Cardinals	77	38.96	7.79	19.48	14.29	7.79	2.60	3.90		5.19
New York Giants	67	38.81	17.91	8.96	10.45	11.94	7.46		1.49	2.99
Buffalo Bills	75	38.67	13.33	10.67	14.67	13.33	5.33			4.00
Minnesota Vikings	58	37.93	12.07	13.79	12.07	6.90	6.90	3.45		6.90
Miami Dolphins	67	37.31	14.93	22.39	7.46	10.45	2.99	1.49		2.99
Jacksonville Jaguars	70	37.14	12.86	14.29	14.29	7.14	1.43	1.43		11.43
New England Patriots	63	36.51	20.63	23.81	6.35	3.17	1.59	1.59	1.59	4.76
New Orleans Saints	63	36.51	14.29	9.52	15.87	4.76	12.70	1.59		4.76
Detroit Lions	69	36.23	11.59	14.49	10.14	8.70	5.80	2.90		10.14
Denver Broncos	64	35.94	10.94	15.63	9.38	10.94	6.25	3.13		7.81
Dallas Cowboys	61	34.43	6.56	11.48	14.75	11.48	11.48	4.92		4.92
Indianapolis Colts	68	33.82	13.24	14.71	17.65	10.29	2.94	2.94		4.41
Atlanta Falcons	66	33.33	24.24	10.60	12.12	4.55	4.55	4.55		6.10
Cincinnati Bengals	66	33.33	12.12	19.70	19.70	1.52	6.06	1.52		6.06
Tampa Bay Buccaneers	69	33.33	11.59	13.04	15.94	10.14	4.35	1.45		10.14
San Francisco 49ers	68	32.35	17.65	16.18	11.76	10.29	5.88	2.94		2.94
Green Bay Packers	69	31.88	13.04	13.04	17.39	14.49	2.90	2.90		4.35
Baltimore Ravens	61	31.15	8.20	24.59	8.20	8.20	6.56	3.28		9.84
Los Angeles Chargers	61	31.15	19.67	14.75	14.75	8.20	6.56	4.92		
Cleveland Browns	63	30.16	19.05	17.46	12.70	6.35	6.35	1.59		6.35
Los Angeles Rams	60	30.00	8.33	11.67	23.33	10.00	8.33	5.00		3.33
Philadelphia Eagles	68	29.41	19.12	13.24	19.12	11.76	2.94			4.41
Carolina Panthers	65	29.23	9.23	18.46	13.85	10.77	4.62	1.54	1.54	10.77
Oakland Raiders	77	23.38	16.88	19.48	23.38	2.60	7.79	2.60		3.90
Total	2103	757	270	314	302	176	115	48	3	118

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Table VI shows most players across all population groups played as either a linebacker or a wide receiver. Small-town players made up the majority of all positions except in the long snapper position. The majority of long snappers were from populations of 250,000 to 299,999 (22.7%) and 500,000 to 999,999 (22.7%). While there were only three halfbacks in the NFL, two of them were from a small-town. Small-town players also made up a great majority in the fullback, kicker, offensive line, and offensive tackle positions; despite a relatively small number of players in those positions. Out of a total of 22 offensive linemen, 50% were from a small-town. Of the 37 kickers, 51.4% were from a small-town. Small-town players made up 62.5% of the 16 total fullbacks and 66.7% of the 3 halfbacks within the league. The most played positions were wide receiver and linebacker. Small-town players made up 34.4% of the wide receivers and 40.4% of the linebackers.

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Table-V: Percentage of Position in Population Groups

Position	Number of Players	0 – 50,000	50,001 – 99,999	100,000 – 249,999	250,000 – 499,999	500,000 – 999,999	1,000,000 – 2,499,999	2,500,000 – 4,999,999	5,000,000 +
Halfback	3	66.7		33.3					
Fullback	16	62.5	12.5	12.5		12.5			
Kicker	37	51.4	13.5	10.8	13.5	5.4	5.4		
Offensive Line	22	50.0	13.6	22.7	4.5	9.1			
Offensive Tackle	136	46.3	14.7	13.2	11.0	9.6	3.7	1.5	
Center	57	45.6	17.5	10.5	10.5	10.5	3.5	1.8	
Offensive Guard	80	43.8	8.8	13.8	15.0	8.8	6.3	3.8	
Tight End	119	42.9	12.6	19.3	10.1	11.8	0.8	0.8	1.7
Defensive Tackle	157	41.4	10.2	15.9	15.9	8.3	5.7	2.5	
Linebacker	255	40.4	12.5	15.3	17.3	7.1	5.1	2.4	
Nose Tackle	5	40.0		20.0	20.0			20.0	
Running Back	150	37.3	14.0	17.3	17.3	6.0	4.7	3.3	
Defensive Line	11	36.4	18.2	9.1	18.2	9.1		9.1	
Safety	131	35.1	14.5	16.0	14.5	8.4	10.7	0.8	
Wide Receiver	256	34.4	14.8	12.5	16.8	7.4	8.6	5.1	0.4
Punter	32	34.4	18.8	18.8	18.8	3.1	6.3		
Quarterback	73	32.9	15.1	19.2	19.2	12.3	1.4		
Cornerback	193	32.6	13.5	16.1	16.6	11.4	7.8	2.1	
Defensive End	148	32.4	12.8	16.9	15.5	10.1	10.1	2.0	
Defensive Back	82	31.7	17.1	23.2	13.4	8.5	2.4	3.7	
Long Snapper	22	18.2	18.2	18.2	22.7	22.7			
Total	1985								

Similar results showing small-town natives comprised the majority of offense, defense, and special teams' positions, and starting status among population groups, were found among the NFL conferences. See Appendix A-I, A-II, A-III, and A-IV for more information and groupings.

Table VII shows the median, mean, and standard deviation of each of the population distribution groups. The average size of a small-town among the NFL players hometowns was 18,612.16. Interestingly, the average size of a hometown of more than

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5,000,000 was 9,087,333. The standard deviation is large as there was great variance across population sizes; the smallest hometown reported had a population of 107 and the largest population reported was 10,016,000.

Table-VI: Population Statistics			
SD	Mean	Median	City Size
13,558.38	18,612.16	16,439.00	0 – 50,000
13,685.52	69,636.66	67,798.50	50,001 – 99,999
44,699.57	165,583.90	166,965.00	100,000 – 249,999
77,978.92	382,563.40	393,292.00	250,000 – 499,999
123,346.50	702,294.90	652,236.00	500,000 – 999,999
430,639.70	1,753,557.00	1,581,000.00	1,000,000 – 2,499,999
658,132.00	3,375,729.00	4,000,000.00	2,500,000 – 4,999,999
804,248.90	9,087,333.00	8,623,000.00	5,000,000 +

It was found that players from a population of less than 50,000 have 1.25 times or 25% greater chance of starting when compared to players from populations greater than 50,000 (p=0.02, 95% C.I. = 0.661, 0.966). When compared to small-town players the population group of 100,000 to 249,999 were 75.3% less likely to start (p=0.048, 95% C.I. = 0.568, 0.997). The population group between 250,000 and 499,999 were shown to be 77.3% less likely to start (p=0.076, 95% C.I. = 0.582, 1.027) compared to small-town players, while the population group of 2,500,000 to 4,999,999 were 56.1%

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less likely to start ($p=0.091$, 95% C.I. = 0.287, 1.097). Although these values were not statistically significant these can be considered trending toward significance.

Chapter V. Discussion and Conclusion

The purpose of this study was to find what percentage of NFL players are from a small-town and if they play. This study looked specifically at the following variables compared to the hometown population distributions of each player: NFL conference, position, offense versus defense, hometown, university, and university division and NCAA subdivision. It was the primary intent of this study to determine how many athletes from small-towns were prevalent in the NFL on active playing rosters. The secondary intent was to find if small-town athletes were more prevalent at specific positions, conference, or another specificity. To find this information this study asked four questions: (a) How many NFL players are from a small-town (population of 50,000 or less), (b) do small-town players play specific positions, (c) do certain teams sign more small-town players than others, and (d) how many small-town players start?

Number of Small-Town Players

When considering the first question of this study, results showed a large group of the 2018 NFL players were from a small-town; 38.14% of the players were from a town of less than 50,000 people. This was more than any other population distribution group. In fact, more than half of the NFL players (51.74%) reported a hometown of less than 99,999. A total of 82.77% of the 2018 NFL players reported a hometown with a population of less than 500,000; this is consistent with previous findings of an over-representation of players from cities smaller than 500,000 (Côte et al., 2006; MacDonald et al., 2009).

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MacDonald, Cheung, Côte, and Abernathy's (2009) NFL hometown population breakdown was similar to the results of this study. However, there were differences. The 2004 NFL roster recorded 49.8% of players from a small-town while the 2018 roster showed 38.1%, a drop of 11.7%. MacDonald, Cheung, Côte, and Abernathy (2009) relied upon the 1980 Census for the hometown population data. At that time, 26.3% of the U.S. population lived in towns and cities with populations of 50,000 or less. The 2010 Census, used for this study, reported 19.3% of the U.S. population lived in a rural area or a small-town (United States Census Bureau, 2016). Over a period of 30 years there was a decline of 7.0% in the small-town America population. Over the same 30 years there was a drop of 11.7% of small-town NFL players. There are many reasons why there was a decline in the small-town America population over time. It is possible individuals moved to larger cities for better paying or more variety in jobs, more schooling choices, or changes in family situations. Small-towns may provide more agricultural related jobs and limited numbers of job in other industries. To work in large factories, big businesses, or other industries, families may have had to move from their small-towns to larger, more populated cities. Despite the drop, it is still significant that more than 38% of the NFL grew up in areas that make up just 19% of the total population.

In this study, the average size of a small-town among the NFL players hometowns was 18,612. When the small-town populations were broken down into ten thousand increments, it was obvious there was a large portion of the players that were from rural areas – less than 10,000 in population. In fact, 12.8% of all NFL players were from a town with a population of 9,999 or less which is a higher percentage than that of

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other population distributions that covered hundreds of thousands of populations.

These players could be the “farmer’s kid” who works on his family’s farm after practice, the eight-man football star, or the four-sport athlete who has never had an off-season.

Interestingly, the average size of a hometown of more than 5,000,000 was 9,087,333.

There was a great range in hometown sizes across all population distribution groups.

The player from the smallest hometown reported a population of 107 and the largest population reported was 10,016,000. It is possible players reported a larger more known or more popular city close to their hometown for ease or simplicity. It is suggested a player from a rural town may have reported the closest popular city for others to recognize rather than explain a small-town very few would know of. However, this cannot be known as all information was public data and expected to be accurate.

It has been found that environmental factors such as city size can affect youth sport development (Kyttä, 2002; MacDonald et al., 2009). Children who are raised and develop in larger cities are more likely to have access to specialized resources, structured sport settings and bigger facilities than those in smaller areas (Côte, Baker, & Abernathy, 2003). On the other hand, athletes in smaller cities tend to be introduced to sports and develop differently as athletes due to varied player sizes and abilities available in their area (Côte et al., 2003; Côte et al., 2006; Soberlak & Côte, 2003). Youth in small-towns are likely to develop as athletes in informal sport settings. Informal sport settings have been found to facilitate elite sport performance and achievement during early development with a supportive and facilitative psychosocial environment (Côte et al., 2006). Athletes in informal sports learn how to organize teams and games, create

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and enforce rules, and take responsibility in decision making, all of which are important characteristics in elite athletes. This may be the reason small-town athletes make up a large portion of the NFL. As Gladwell (2008) stated, "Their success was not just of their own making. It was a product of the world which they grew up" (p. 67). Small-town athletes are looked to be more independent, multi-talented, and have stronger commitment than athletes from larger, urban cities.

Distribution Across Positions

The second question of this study asked if small-town players played specific positions. There were 21 different positions played among all the players. Compared to other population groups, more small-town players played in every position (a range of 31.7% - 66.7% per position) except the long snapper position as small-town players made up only 18.2% of the 22 players. Out of a total of 22 offensive linemen, 50% were from a small-town. It may be suggested the small-town "farmer's son" had a stronger work ethic and physicality in this position. Of the 37 kickers, 51.4% were from a small-town. As the number of players in every position varied greatly there was no specific position found to be played by a small-town player, rather small-town players played in every position.

Based on the informal sport structure in which small-town athletes develop, it is reasonable to assume small-town athletes grow up playing several positions and sports. Therefore, they were not likely to play one specific position in football, rather they were multitalented and played several positions if needed. It is possible in a small-town a football team may have very few extra players or even enough players to fill a team.

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Hence, a good athlete may have to play several positions on both defense and offense.

For example, the quarterback may have also had to play as the safety and/or punt returner to give the team the best chance to win and also to have enough players on the field.

Distribution Across Teams and Conferences

The third question in this study examined the differences among teams and population distributions. Small-town players made up the majority of each team in the NFL, except for the Oakland Raiders. The Oakland Raiders reported the same number of players from a population between 250,000 and 499,999 (23.38%) as they did from a small-town population (23.38%). The Kansas City Chiefs - the number one ranked team in the AFC Division at the end of the 2018 season had the highest number of small-town players on their team at exactly 50%. Other teams that reported a large percentage of small-town players on their team were: Washington Redskins (46.75%), Chicago Bears (42.86%), Tennessee Titans (41.27%), Pittsburgh Steelers (41.07%), Houston Texans (40.63%), and Seattle Seahawks (40.32%).

The average number of small-town players on each team was 36.05%. The next highest distribution among population groups across most teams were players from a hometown population range of 100,000 to 249,999 with an average of 14.87%.

Interestingly, when looking at the population distribution across the eight NFL conferences, there were no significant differences in the number of small-town players or in any population group.

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What makes these small-town players so desirable and successful at the professional level? Past research suggests it is a combination of characteristics: a strong motivational climate and support system that encourages participation and commitment, a passion and enjoyment for the game, and a lack of burnout due to multi-sport participation— all characteristics of athletes whose youth sport development took place in a small-town (Baker et al., 2003; Côte et al., 2006; Côte et al., 2007; MacDonald et al., 2009; Soberlak & Côte, 2003).

Starting Status

The final question of this study looked to find how many small-town players were actually playing in the NFL. It was found that 38.14% of the NFL players were from a small-town but it was unclear if these players were making the practice roster, third string in their position, or on injury reserve. Thus, it was determined a player's starting status would give the most accurate determination of a player's degree of play. When looking at the odds ratio of starting status and city size, it was found that small-town players were 25% more likely to start compared to players from populations of more than 50,000. It could be argued small-town players have a stronger work ethic from growing up in a smaller area where it is common to have played multiple positions and even sports. As there were no interviews done to determine the reasoning, it is unknown the exact reason.

MacDonald, Cheung, Côte, and Abernathy (2009), looked at the probability an athlete had of making it to the NFL based on the population of their hometown. It did not take into account the playing status, position, or team. MacDonald and associates

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(2009) found athletes from a population of 50,000 to 99,999 have an odds ratio of 10.79 which was significantly higher than any other population group. However, the majority of both the 2004 and 2018 rosters showed the majority of the NFL players were from a population of 50,000 or less, which was found to have an odds ratio of just 2.77 (MacDonald et al., 2009). Despite, having the best odds athletes from a population of 50,000 to 100,000 were not as prevalent in the NFL as those from other populations. This discrepancy is evident in more than just the NFL. Côte, MacDonald, Baker, and Abernathy (2006) found the highest odds ratios in populations between 50,000 and 100,000 but the highest frequencies in populations of 50,000 or less in the National Hockey League, National Basketball Association, Major League Baseball, and Professional Golfers Association.

Within the 2018 NFL rosters used for the current study, it was not evident that coming from a hometown population of 50,000 to 100,000 provided any better chance of playing at the professional level of football. Only 13.6% of the players were from a hometown population of that size which was the fourth largest distribution group. More than double the players from any other group were from a small-town at 38.14%. The next highest distribution groups were populations between 100,000 and 249,999 (15.82%) and 250,000 to 499,999 (15.21%).

It has been said that “hometowns shape elite football participation via opportunity and aspiration mechanisms” (Allison et al., 2018, p. 617). Small-town school settings have been shown to have positive impacts on socialization, popularity, self-esteem, self-efficacy, and social support (Côte et al., 2006; Elgar et al., 2003; Pilling,

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2003). With a large portion of the NFL growing up in small-town settings it is important to learn the reasons why these athletes are successful making it to the elite level of their sport. How and why are small-town schools and settings developing the elite athletes?

Conclusion

This study established that not only do small-town players make up 38.14% of the total NFL players and play all positions but they also have a 25% greater chance of starting and playing. While there are many reasons for this phenomenon, it may be suggested small-town players grow up as the “big fish in a little pond”. A talented player stands out in a small-town and could continue to excel through his development and into college then professional play. They are known and expected to always be the best, so they strive to continue that success as they move up to the elite level of play. Small-towns may have only one or possibly two schools in the whole town. Therefore, it is possible the community around the school and the athletes would be extremely supportive and encouraging. This is known to be a positive reinforcer for commitment and participation in youth sport. Informal sport structures encourage playing for fun and lack strict rules or official organization, which leads to enjoyment and continued participation. Aspects that are very prevalent in small-town athlete development can enhance skill as well as passion for a sport.

Limitations of this Study

Delimitations of this study included the number of teams and players included in the analysis. Another delimitation was that a player may have moved during their childhood and their place of development may be different than the area they referred

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to as their hometown. The availability and accuracy of the information provided on each team's specific roster were the biggest limitations for this study. The reliability and validity of the information provided on the rosters could not be completely controlled. Nonetheless, for this study it was assumed the listed hometowns were correct and referred to the place of development for each athlete.

Practical Implications

It is important for coaches, athletes, universities, and professional organizations to know where the best athletes are coming from and how to find those athletes. Athletes from small-towns are more prevalent in the NFL as well as other professional sport organizations in hockey, basketball, baseball, and golf (Côte et al., 2006). Athletes from these populations should know and be encouraged to pursue their sport as many of the professional leagues are made up of small-town players. Coaches may need to expand their recruiting areas to include smaller rural towns, rather than looking to large urban cities for the best athletes.

Further research should be done to determine where professional football players are growing up. As this study looked at only one year's worth of information, it is suggested that future research be done on several combined years. As it has been found that a majority of the NFL players from 2018 and the 2004 rosters are from small-towns, more research needs to be done to determine the reason. Interesting topics to associate with the prevalence of small-town players would be socioeconomic status, multi-sport participation versus specialization, or the social psychological environment that an athlete is raised in.

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Additionally, little to no research has been done on athlete demographics in Major League Soccer. Further research should be done to compare positions, starting status, and individual team statistics in other professional sports such as the National Basketball Association, Major League Baseball, National Hockey League, and the Canadian Football League.

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Appendixes

Appendix A-I: Population Distribution Among Conferences

Appendix A- I: Population Distribution Among Conferences

Conference	Number of Players	City Size								No Hometown
		0 – 50,000	50,001 – 99,999	100,000 – 249,999	250,000 – 499,999	500,000 – 999,999	1,000,000 – 2,499,999	2,500,000 – 4,999,999	5,000,000 +	
AFC South	265	38.11	11.32	10.94	15.85	10.19	4.53	2.64		6.42
AFC East	273	38.10	14.29	19.05	10.26	7.69	4.40	0.73	0.37	5.13
NFC East	273	37.73	12.82	12.45	15.02	10.26	6.59	1.47	0.37	3.30
NFC North	252	36.90	11.51	13.49	13.89	11.11	4.76	2.38		5.95
NFC West	267	35.58	10.11	14.98	17.23	7.87	5.62	3.75		4.87
AFC West	264	34.47	14.77	16.67	13.64	6.82	6.06	3.41		4.17
AFC North	246	33.74	13.01	19.11	14.63	5.28	5.28	1.63		7.32
NFC South	263	33.08	14.83	12.93	14.45	7.60	6.46	2.28	0.38	7.98
Total	2103	757	270	314	302	176	115	48	3	118

Appendix A-II: Population Distribution Among Possession Teams

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Appendix A- II: Population Distribution Among Possession Teams

Team	Number of Players	0 – 50,000	50,001 – 99,999	100,000 – 249,999	250,000 – 499,999	500,000 – 999,999	1,000,000 –	2,500,000 –	5,000,000 +	No Hometown
Offense	953	38.30	13.33	14.38	13.64	8.29	4.41	2.62	0.31	4.72
Defense	1040	34.23	12.21	15.58	15.00	8.56	6.63	2.21		5.58
Special Teams	110	32.73	14.55	13.64	14.55	7.28	3.64			13.64
Total	2103	757	270	314	302	176	115	48	3	118

Appendix A-III: Population Distribution of Starters Versus Non-Starters

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Appendix A- III: Population Distribution of Starters Versus Non-Starters

Status	Number of Players	0 – 50,000	50,001 – 99,999	100,000 – 249,999	250,000 – 499,999	500,000 – 999,999	1,000,000 – 2,499,999	2,500,000 – 4,999,999	5,000,000 +	No Hometown
Starter	714	39.50	14.15	13.59	13.31	7.84	4.76	1.68		5.18
Non-Starter	1389	34.20	12.17	15.62	14.90	8.64	5.83	2.59	0.22	5.83
Total	2103	757	270	314	302	176	115	48	3	118

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Appendix A-IV: Small-Town Population Distribution of Starters and Non-Starters

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Appendix A- IV: Small-Town Population Distribution of Starters and Non-Starters

Small-Town Size	Non-Starter	Starter	Total
0-9,999	165	89	254
10,000-19,999	114	76	190
20,000-29,999	90	51	141
30,000-39,999	61	42	103
40,000-50,000	44	25	69
Total	475	283	757