Myth or Reality: Home-Field Advantage and How to Maximize Performance in Athletes

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Abstract

The purpose of this research is to quantify what specifically leads athletes to perform their best. Audience feedback and home-field advantage mainly contribute to how an athlete performs. The home-field advantage in athletics can be defined by home team’s winning over 50% of their games when there is a balanced home and away schedule. Others have suggested a home-choke or home-field disadvantage rather than a home-field advantage during high-pressure games, but a significant advantage for home teams was observed across four of the five potential moderators investigated. Two models of home-field advantage were identified breaking down how the home advantage occurs and how certain influences affect athletes’ performance non-consciously. The first proposes the predictors of the home-field advantage into major components and the second explains the various psychological processes that occur before home and away games that govern the outcome through possible hormonal factors. A new third model should be created as the standard resource for home-field advantage, covering the gaps of each of the current models. Coaches, players, and parents need to recognize these factors that can help eliminate certain consequences to better manipulate the outcomes of games.

Sporting events play a major role in society as a form of entertainment. Many fans attend these events in person to support the home team, which is why teams prefer to play at home. Different factors can affect the performance of players depending on the location of where the game takes place and what type of sport the athlete is playing. This has led to the idea of a home-field advantage and has triggered considerable controversy in the sports psychology world. Psychologists are continually trying to understand what causes the home advantage and what factors can make this advantage stronger or weaker.

For home teams, home-field advantage has been shown to positively affect the performance of players significantly, in comparison to visiting teams, due to factors from the audience, field familiarity, regime regularity, and other strategic advantages. A point of debate is that home teams sometimes have a greater *dis*advantage in more decisive games, especially in playoff series, instead of the previous advantage enjoyed in earlier games of the same playoff series. The goal of this paper is to understand what contributes to a home-field advantage, a home-field disadvantage, the various moderators of this effect, and how the audience’s feedback effects the performance of athletes.

At most sporting events, except extraordinary circumstances, there is always an audience; observers as well as participants physically present at the event. The audience can affect the performance of the players at the event depending on the performer's subjective perceptions of what their audience is communicating (Wallace, Baumeister, & Vohs, 2005). The three types of audiences, supportive, unsupportive, and silent, each produce a different response for the home and away team. A supportive audience is when the members want the performers of a specific team to succeed and conveys this through cheering and applause. The supportive audience is normally rooting for the home team and encompasses the most fans at the event. An unsupportive audience is when its members communicate their hope of the opposing team to fail to the other opponent and conveys this through booing and jeering, which are rude and mocking remarks. The unsupportive audience is normally against the visiting team because the home team is always the favorite to win. The third type of audience is a silent audience, which is when its members lack any audible sound or have a presence of low intensity during any skilled or effort-based performance. This type of audience is the most beneficial to a golfer’s performance, for example, because it is common for golf audiences to be silent. If the audience cheers or jeers, it could be distracting and cause a poor performance because it goes against the norm for this sport. Other sports like baseball, basketball, and soccer are used to a loud and cheering audience so it could be distracting if their audience was silent (Epting & Riggs, 2011).

**Home-Field Advantage vs. Home-Field Disadvantage**

When a team plays on their home field, with the amount of various of effects working together, an advantage or disadvantage occurs depending on what those factors are. A neutral effect will never happen where either team does not have an advantage or disadvantage because at least one factor will have an affect positively or negatively.

The home-field advantage can be defined by home teams in various sport competitions winning over 50% of their games when there is a balanced home and away schedule. The home-field advantage conceptual model describes the advantage further by explaining what variables and moderators affect the outcome of a game, which will be discussed in further detail later. Home-field advantage is universal across all types of sports, including both professional and amateur team sports, individual sports, all ages, and all genders (Carron, Loughead, & Bray, 2005).

The home-field disadvantage can be defined as when teams playing at home choke and perform poorly. This is likely to happen during high-pressure games such as championship or playoff games. High pressure games can lead to a larger, louder, and denser supportive audience, along with an increase in motivation for the performers to do well in front of the spectators. The supportive audience of the home team can cause the athletes to choke when they are on the verge of winning because the pressure is too intense for them. Choking under pressure refers to when an athlete’s performance under high pressure is inferior to their performance under low pressure (Wallace et al., 2005). This disadvantage is known as the home-choke hypothesis that was originally identified in 1984 (Baumeister & Steinhilber, 1984). The hypothesis has been reevaluated as current research (Pollard & Pollard, 2005; Tauer and Rozek, 2009; Jones, 2014) refutes the original data (Baumeister & Steinhilber, 1984).

In earlier studies of choking, championship archives were used from baseball and basketball. The MLB baseball archives included games from 1924 to 1982 and the NBA basketball archives included games from 1967 to 1982 (Baumeister & Steinhilber, 1984). To win a championship, a team must win four out of seven games of a series for both baseball and basketball. For each sport, the archives showed that the home teams tended to win the first two games, but lost the more important games later in the championship series. Despite having a strong advantage in crowd support, home teams have continuously lost the championship demonstrating an increase in errors over the course of the series in comparison to the visiting team. When the home team focused on winning, choking was hypothesized to occur because players were thought to draw self-attention to themselves since they wanted to impress their supportive audience. Indeed, the home team’s performance decreased, providing evidence that choking was found in both baseball and basketball (Baumeister & Steinhilber, 1984).

However, when a longer time-period of baseball games was examined, including information from 1983-1992, there was no support for the home-choke hypothesis. For example, four World Series since 1982 went into the seventh game, and each one was won by the home team. The research shows no evidence of the home team having a disadvantage in decisive contests or doing worse in the last deciding games compared to the first two games of the series (Schlenker, Phillips, Boniecki, & Schlenker, 1995).

Similarly, when the basketball information was updated to 2006 to see if there was an effect from recent series data, there was also no support for the home-choke hypothesis. Instead of just including championship series, the data was expanded by analyzing the quarterfinal and semifinal series, in addition to the championship series, to see if other playoff competitions had a different occurrence of the home choke. When teams played at home and led a series 3-1, 3-2, or trailed a series 3-1, the home team received a strong advantage at these points during the series and ended up winning. Must-win games and a chance to clinch the series were also examined along with data from athletes who play at the NCAA Division III level. At this level, the student-athletes do not receive compensation to participate in athletics. There is less pressure for them to perform well because they do not have the fear that their athletic scholarship will be taken away. These scenarios had not been studied before. When the type of series information was examined, the pattern of wins showed evidence of a greater home-field advantage than a home-choke disadvantage (Tauer and Rozek, 2009).

The baseball and basketball archives were updated one last time to 2011. New championship series information was added focusing on all games played in a series, not just early and last games. In baseball, for the last eight seven-game series, all were won by the home team, with the percentage of home wins being higher than the first two games. For basketball, the away team won only two of the 17 series that went the full seven games. Again, the evidence does not support the home-choke hypothesis in either of these team sports (Jones, 2014).

In all the earlier studies, only baseball and basketball archives were explored even though hockey is the only other major professional team sport that has a championship decided by a multiple game series. NHL hockey archives, which included games from 1917 to 2003, were analyzed in 2005 to see if a different team sport would support the home-choke hypothesis. For a choke to occur, the home team would have to be up during the series at one point, demonstrating an advantage at home. The away team would then have to come back and beat the home team later in the series. The home-choke hypothesis was not supported because home teams in the NHL were losing around Game 4 of a seven-game series. This is sooner than when the home-choke is supposed to happen, meaning that the home team would lose without any choking involved (Pollard & Pollard, 2005).

In the most recent studies, there has been no evidence shown to support the home-choke hypothesis or a home-field disadvantage for home teams in any of the three team sports of baseball, basketball, and hockey (Jones, 2014; Pollard & Pollard, 2005). From this conclusion, home-field advantage is shown to still play an important role in determining the performance of home teams, which refutes original research (Baumeister & Steinhilber, 1984). Home-field advantage occurs due to the positive support from the audience and the combination of other game location factors which will be discussed further in the next section. Therefore, there is no expectation of any prominent choking of the home team occurring in the future during high pressure games and the home-field advantage will continue to occur. The disappearance of the choke could have occurred due to changes in athletics like the addition of more teams, larger arenas that can hold more fans, free agency, and the broadcast of sports. These changes will also be discussed in more detail later.

**How Does the Home-Field Advantage Occur?**

Home-field advantage is important because it gives the home team a psychological advantage over the away team, mostly from having a supportive audience. There are two home-field advantage models that describe how the home-field advantage occurs and how certain influences affect performance outcomes without players even knowing. The first is known as the home-field advantage conceptual model which divides the home advantage into five different components. Each part works with one another to create the home advantage and does not occur from one condition itself. The territoriality model, the second model, explains the various psychological processes that occur before home and away games that governs the outcome through possible hormonal factors. Each model shows in-depth evidence to support their main conclusions.

**The Home-Field Advantage Conceptual Model**

The home-field advantage conceptual model, the first model studying the home advantage, proposed the predictors of the home-field advantage into five major components: game location, game location factors, critical behavior states, critical psychological states, and performance outcomes (Courneya & Carron, 1992). The model was modified to add current research to the framework, provide future research ideas, and improve the game location factors component because it did not originally account for collective efficacy as a condition, performance pressure as a sub factor, or a social sub factor (Carron et al., 2005).

**Game location.** The first component is game location and it represents the site of where the teams play, whether it be home or away for the competition. Away teams have the disadvantage of being unfamiliar to the setting, little to no fan support, the burden of traveling to their opponent’s location, and perception that they will perform poorly away (Bray & Widmeyer, 2000). Due to these drawbacks, visiting teams experience a heightened arousal that is exacerbated by crowd noise. The home team’s performance increases because the crowd noise energizes and motivates the players, creating an optimum level of arousal. The visiting team becomes over-aroused by the crowd noise, causing a decline in their performance (Greer, 1983).

**Game location factors.** When players play at home, there are other factors besides being on home turf itself that may contribute to an advantage. These are known as game location factors, which consist of the specific aspects of the home or away field beyond where the competition is located. The four different factors of game location are crowd factors, familiarity, travel, and collective efficacy. For the model to be more efficient, it should delete game location factors as a component because it is a subcategory of the game location component. Readers would better understand how the separate conditions are related to the home field and the model would be more simplified.

***Crowd factors***. Crowd factors, which include the crowd’s density, size, and noise, is one condition that represents the different support of spectators and their impact on the players’ and officials’ performances. Crowd density, commonly defined as the used percentage of the total square meter of venue capacity, shows that the denser the crowd is, the greater the home-field advantage (Agnew & Carron, 1994). This goes along with crowd size that also shows that larger crowds create a greater home-field advantage because of the larger supportive presence for the home team. Crowd size is determined by the amount of people who attend the game, no matter where they stand. Crowd density differs from crowd size because depending on how people stand, the density gives the impression of how empty or full a stadium is as determined by the number of people per square meter. A larger crowd can provoke the visiting team to make a greater number of fouls by taunting them (Nevill, Newell, & Gale, 1996).

Crowd noise has been particularly problematic in sports or situations that require the subjective judgement of the referee, like gymnastics and figure skating. Since a bias for the home team is created, it causes crowd noise to be the most influential factor for game location (Nevill, Balmer, & Williams, 2002).

When a large hostile crowd is compared to a large peaceful crowd, the pressures from the hostile fan group drive referee bias more frequently because the noise is considered a signal of pressure. The pressure can weigh heavily on a decision maker (i.e., referee, judge, or umpire) and lead to a biased judgment to not risk going against an angry crowd (Anders & Walker, 2014). A greater home advantage is observed due to the cheering from a supportive audience for the same reason (Balmer, Nevill, & Williams, 2001). The high volume of crowd noise from the home team influences the referees, causing an incline in penalty cards being given out to away teams. The referees do not want to disappoint the crowd and they are more uncertain in their decision making when it is a close call since the noise is a distraction. The effect occurs more frequently in pure stadiums (i.e., those without a track surrounding the field) because the crowd is in closer proximity to the referee (Unkelbach & Memmert, 2010).

When the home crowd boos the home teams, this means that they are not pleased with their team’s performance. The dissatisfaction conveys a different message to the home and away teams creating opposite outcomes. The booing motivates the home team because they want to impress their fans. The result is an increase in performance. The away team’s performance decreases because the disapproval of the audience becomes disruptive to them. The players on the away team think the jeering is targeted towards them, which disrupts their concentration. The result is that the players become more self-conscious with their movements, which could hinder performance since they are more prone to making mistakes. More ridicule from the crowd is likely to occur, causing a downward spiral (Greer, 1983).

***Familiarity***. Familiarity is the second condition of game location factors that includes the various characteristics in the playing surface in any facility that the home team is familiar with by having practice and games there regularly (Pollard, 1986). When teams are less familiar with a venue that they are playing in, they do not have any home advantage and are, in fact, at a disadvantage because of their lack of experience with the conditions of the venue. This may also include local food and climate that can act against the visiting team when they are not used to the conditions. When certain playing surfaces are different from the average-sized conditions (smaller- or larger-sized), home teams will display a larger home-field advantage because visiting teams will play worse (Pollard, 1986). When a team moves to a new stadium, whether they are playing on the road at other stadiums or have a new home stadium built for their team, their home-field advantage decreases because they are less familiar with the venue. Familiarity is especially hurtful when teams play away during a series because by the end, they are finally getting used to that stadium. When they come back to play at home, they do not have the same advantage they did before they played on the road and will need a brief adjustment period to regain that advantage back (Wilkinson & Pollard, 2006).

***Travel***. Travel is the distance the away team must endure to get to their opponent’s facility. This condition can be detrimental to the away team because they may sometimes have to cross over various time zones, experience new climates, the athletes may get motion sickness from the vehicle they are in, and if the players are flying, jet lag could occur. The home-field advantage increases as the distance the away team travels increases because of the tiredness and fatigue that traveling induces (Pollard, 1986).

***Collective efficacy***. Collective efficacy is a group’s shared belief that by working together a certain way, they will be very successful in what they are doing. The collective efficacy of a team is perceived to be greater when they are playing at home. As individuals, athletes consider themselves to have more self-confidence when playing at their home field because their perceptions of the team's shared confidence in the team's abilities is higher at home than away (Bray & Widmeyer, 2000). Collective efficacy is not one of the original conditions of this component, but has been suggested that it could potentially be a part of the model in the future as a game-context factor. Game-context factors are specific characteristics of the athletic events like season-length, time era, and type of sport (Carron et al., 2005). These factors provide a more in-depth analysis of the home-field advantage and what specifically causes the effect in relation to other components.

**Critical behavior states.** A critical behavior state is an action, whether it be assertiveness or other strategic decisions from a player, referee, or coach, that leads to a home-field advantage. The behavioral state of referees can be easily influenced by the actions of the fans by them either cheering or jeering. The referees do not want the crowd to become unhappy which translates to giving the home team less fouls and cards (Epting & Riggs, 2011). For players, it can relate to aggression, tactics, the amount of effort given, and subjective decision making (Anderson, Wolfson, Neave, & Moss, 2012). These effects are important because they directly affect how the player and team perform on any given day either positively or negatively.

**Critical psychological states.** The critical psychological state is the current state of individual competitors when playing at home or away. Normally, athletes will have a more positive psychological state when they are playing at home compared to a negative state when playing away. There are five psychological states that will be discussed. They include performance pressure, self-fulling prophecies, social facilitation, the psychological effect of coaches, and social factor. The social factor state was not on the original model, but should be added as it is another important issue psychologically (Carron et al., 2005).

***Performance pressure.*** Performance pressure is when an athlete experiences stress during a sporting event because they believe they must perform at a certain level and do not think they will reach that standard. Athletes experience this pressure when they do not know the outcome, when the outcome is important to the athlete, and when the athlete understands that they are going to be judged based on the outcome. Performance pressure is one psychological state that was not in the original home-field advantage model, but was added to the most recent model (Carron et al., 2005). The home team will have decreased performance pressure in comparison to the away team for all the reasons discussed to this point. The only exception would be during high-pressure competitions like playoff or championship games, where both teams will experience performance pressure.

***Self-fulfilling prophecies.*** Another critical psychological state is self-fulfilling prophecies, which are predictions that directly or indirectly causes something to become true because of the feedback between belief and behavior. If athletes report a more positive psychological state at home compared to their state when they are playing away, they will play better at home, contributing to a bigger advantage (Terry, Walrond, & Carron, 1998). If players believe that their team’s chances of winning are greater when playing at home versus playing away, their prediction will come true based on their belief directly or indirectly (Bray & Widmeyer, 2000). Further, an individual athlete’s beliefs and self-fulfilling prophecies can feed into collective efficacy. Recall that collective efficacy is when the home team has a higher shared confidence in their team’s ability to perform at home compared to when they play away. From this perception, the team’s shared confidence will decrease when playing away because that is what they are all thinking subconsciously and their thoughts will be put into action, creating a self-fulfilling prophecy on both an individual and a team level.

***Social facilitation.*** Social facilitation is an audience effect that causes people to perform differently in the presence of others versus when they are alone. When in the presence of others, arousal occurs. Home teams have a lower level of arousal compared to away teams who experience a higher level of arousal due to their lack of familiarity of the environment. The arousal that occurs strengthens dominant responses which enhances the performance of easy or well-learned behaviors and impairs difficult or novel behaviors. Playing at home is a simple or easy task that increases the player's performance whereas playing away, is a more difficult task so player’s performance will decrease. Social facilitation can be more apparent in offensive-based positions than defensive-based positions because they are more skill-based and well-practiced processes (Greer, 1983; Zajonc, 1965).

***Psychological effect of coaches.*** Coaches can influence how the athletes perform by how they deal with the athlete’s psychological states of anxiety, self-presentation, and outcome expectations. Coaches can focus their efforts on tactics such as goal setting, routines, visualization, and confidence to negate negative thoughts that athletes may have. These negative thoughts can impact the athlete’s psychological state of anxiety along with performance pressure and confidence (Terry, Walrond, & Carron, 1998). Self-presentation, the process of claiming a desired identity through an important social performance in front of a supportive audience, can increase concerns about how one portrays themselves (Baumeister & Steinhilber, 1984). To bolster self-esteem, coaches can encourage attributional bias for their players, which is the use of internal attributions to explain positive outcomes (Anderson et al., 2012). The encouragement can help athletes limit their expectations of what outcome will occur before they even start playing.

***Social factor.*** Social factors are various facets in life that affect people’s lifestyle. Some examples include societal norms and influences, stress, anxiety, environmental cues, and other social pressures. Social factors can highly influence an athlete’s psychological state based on the situation they are currently present in (Terry, Walrond, & Carron, 1998). If athletes do not know how to control these social factors, they will have performance issues and can impact the home advantage greatly. Some issues that can increase these social factors, especially stress and anxiety, include physical demands (i.e., injury, weakness), psychological demands (i.e., mood, worry), environmental demands (i.e., weather, elevation level), and the expectation to perform well (Storch, Storch, Killiany, & Roberti, 2006).

**Performance outcomes.** Together, the four conditions of game location, game location factors, critical behavior states, and critical psychological states, influence the performance outcome of athletes and how much of an impact the home advantage will play. There are three levels of outcomes that can occur in an athletic event. The first or primary outcome includes game-specific outcomes like free-throw percentage or earned run average in baseball that can affect a team winning or losing. The secondary outcome includes the amount of points that are scored by both the home and away teams. The last or tertiary outcome includes the win-loss ratio of the home and away teams. The three types of outcomes are looked at separately to see if the influences of the other four conditions affect each of the levels differently.

**The Territoriality Model of Home-Field Advantage**

        The territoriality model is another home-field advantage model suggesting that the home-field advantage is caused by the athlete's desire to want to defend the home field more because it is their domain. Athletes feel that it is embarrassing to lose on their home turf because that is where all their support is and where they have put all their hard work in at. When playing at home, higher testosterone levels are shown before home game than away games that can benefit performance due to the increase of motivation and aggression in males. The model is only theorized to apply to males because females are thought to be less influenced by free floating levels of testosterone in their bodies. Due to this conclusion, females have never been tested (Neave & Wolfson, 2003).

Testosterone levels and another salivary steroid hormone, cortisol, was studied in male soccer players to see if either of their levels are affected by playing venue. After studying before and after game levels of both steroids, there was no difference in the testosterone level before and after games whether the players were at home or away. However, there was a greater post-game cortisol level suggesting that players on the home team put enormous amounts of pressure on themselves to have positive results in front of their supportive audience. The pressure can cause a higher level of stress, which causes the release of excess cortisol in the body and does not get resolved. The territoriality model is correct in showing that hormones do influence the home advantage, but not specifically testosterone because there was no significant effect (Arruda, Aoki, Miloski, Freitas, Moura, & Moreira, 2016). Since cortisol has the bigger impact here than testosterone, we need research into how this might affect female athletes who would be expected to show similar stress-induced increases in cortisol as male athletes.

**Comparison of Models**

        Both models have a large amount of archival data and experimental studies that support claims of the home-field advantage phenomenon. The home-field advantage conceptual model goes through extensive background of various conditions like game location, the critical states of mind, and performance outcomes of athletes, and how they work well together to create a home-field advantage for a team that plays at their home location. The model does not cover the contribution of various hormones to the home-field advantage. In contrast, the territoriality model explains in detail how hormones affect player’s performance, but does not cover the rest of the conditions explained in the first model in relation to how they work together with hormones. Each model is valid in their own way, but also have extensive gaps that do not explain the full reason why the home-field advantage occurs.

The next step would be to create a third model that covers the gaps of each of the current models to create the go-to resource for the home-field advantage. By combining the two models, every factor of performance, attention, and stress response would be covered and can help assess how and why different outcomes of success and failure occur in various locations.

**What Moderators Affect the Home-Field Advantage?**

There are five potential moderators that have been previously tested to see what situations have a strong or weak home-field advantage. The various moderators include type of sport, level of competition, time era effect, type of position, and length of season. The current moderators are not included on either model that has been previously mentioned, but would be a beneficial factor. The addition of moderator research on a new and improved model would cover further gaps in the home-field advantage phenomenon.

**Type of Sport**

There are two different factors that are a type of sport moderator. The first is based on whether the sport is team- or individually-based. The second compares team and individual sports that are played either indoor or outdoor.

**Individual vs. team.** Sports are considered individually-based when participants compete by themselves rather than as a member on a team. Examples of individual sports are golf, tennis (single-play only), and boxing. The second type, team sports, are activities where individuals are organized into opposing teams and play against one another. Each team has the common goal of winning. Some examples of team sports are basketball, football, hockey, and baseball. For this moderator, the home-field advantage has the same impact on both individual sports and team sports (Carron et al., 2005).

**Indoor vs. outdoor.**  For the sport to be played inside, the sporting event must be performed in a gymnasium or indoor stadium. Some examples of indoor sports are volleyball, ice hockey, and basketball. If a sporting event takes place under a dome, which is a semicircular structure that covers an area of space, the sport at that time is categorized as indoors. Sports like lacrosse, soccer, and track may be performed inside under a dome due to weather conditions. Indoor sports have a more pronounced home-field advantage due to the impact and presence of a larger crowd size and noise since the audience is in closer proximity to the playing surface. The confined space also magnifies the elements to create a more intense home-field advantage and a decrease in performance for the away team (Schwartz & Barsky, 1977).

Soccer, baseball, and football are considered outdoor sports because they are played in an unconfined space with no ceiling barrier. Between the various outside sports, they can each produce a different home-field advantage due to their specific season length that will be discussed later. For this moderator, indoor sports have more of a home-field advantage than outdoor sports due to the playing facility. Few outdoor sports still have some type of advantage over others, but not as intense as it would be if they were playing in an indoor facility.

**Level of Competition**

Level of competition can be separated into two various sections: professional and collegiate. Both categories consist of expert athletes. High school and younger athletes are not included because they have not demonstrated any mastery of their sport. Professionals are paid to play their sport at a high level and collegiate athletes sometimes receive money in the form of scholarships to play at certain schools. Other collegiate athletes are recruited to play at lower level schools for their skill and do not receive any compensation in return. Each type of athlete is considered an expert because coaches and general managers have singled them out as successful athletes in their specific sport.

When the impact of level of competition on home-field advantage was tested, there was no difference between professional and collegiate games when examining the same sport. This suggests that level of competition is not an impactful moderator on the magnitude of the home-field advantage (Carron et al., 2005).

**Time Era Effect**

Time era is a specific span of time that is bound by a start event and an end event. The time era effect is categorized into four different sections: pre-1950, 1951-1970, 1971-1990, and 1991-present. The sections were separated into 20-year blocks to showcase the changes in sports along with having enough data in each time-period. For the time era effect moderator, there is a significant impact on the home-field advantage specifically for sporting events that were played prior to 1950 over the other three time eras. Changes in athletics have occurred dramatically over the years that have caused the pre-1950s to have the strongest home-field advantage compared to present (Pollard & Pollard, 2005).

One example is when the MLB expanded their league out west during the 1950s. During that time, the economy was growing which entitled Americans to head out west for more opportunity. Due to the emergence of cities on the west coast and the economic increase, baseball teams could expand and evolve across the country. The MLB wanted to follow where the people were moving to entertain current fans and gain more viewership. The expansion could have triggered the decrease of the home-field advantage because teams needed to adjust to where their new home-field would be located. The decrease causes them to have a less of a familiarity to their surroundings and playing facility leading to an initial decrease in performance. This also occurred in the NHL, where the home-field advantage was very high during the first seven seasons of the league and has steadily decreased over the past century from the league continually expanding (Pollard & Pollard, 2005).

From 1971-1990, this time-period includes when free agency was implemented in baseball and basketball. A free agent is a player who can sign up with any specific franchise or club without any contract. With new athletes playing at different locations under free will, this also can decrease their advantage because they will constantly will need to readjust to stadiums.

For the most current time-period, the home-field advantage in American football, basketball, and football in England has declined compared to earlier eras (Pollard & Pollard, 2005). One reason for this decline is the increase in live television coverage of both professional and collegiate games. With the improvement in live-streaming technology, spectators who cannot attend games can watch their team play at away games. Since players subconsciously know that they have a supportive audience not physically there, they have an incentive to not play as poorly away because players do not want to be embarrassed or ridiculed by their fans when they go back home (Reade & Koyama, 2009).

With the addition of newly remodeled stadiums for both collegiate and professional sporting events, the venues are starting to become bigger and can hold a larger capacity. If a stadium can hold more fans, than this can bring more revenue to the home team. The home-field advantage increases with the addition of a more supportive audience, especially in an indoor stadium. The crowd size and the crowd noise increases and the home-field advantage has more of an impact on performance. For the schools and professional teams that absorb all the attention from a small town, this can be especially true because more of a supportive audience will be in attendance if there is space for them.

**Type of Position**

For position in sports, there are two basic types: offense and defense. There is a significant impact the type of position played in a specific sport has on the home-field advantage. The players who are midfielders can experience this moderator differently, depending on where they are on the field, because they play both offense and defense.

**Offense**. The position of offense is the action of attacking or engaging with the opposing team with the objective to score against the opponent’s goalie resulting in points or goals in favor for one’s team. Offense is a skilled performance involving more nonconscious, automatic processes that are created from learning and repetitive practice of these processes. Performance pressure primarily impairs skilled performance instead of effort-based performances, which causes the effect of choking (Butler & Baumeister, 1998). The performance of individuals who consciously attempt to control the processes that they normally execute will automatically decreases in those areas (Beilock & Carr, 2011) because they experience self-doubt of their skill when under the pressure (Schlenker et al., 1995). The desire makes the athlete’s attention shift from an external focus to an internal focus when they are paying more attention on their specific movement responses which often results in a performance decrease.

**Defense.** The position of defense is the action of preventing an opponent to score on one’s own goalie. Defense is more of an effort-based performance because it is more susceptible to immediate conscious control with less-skilled actions. An individual can decide to increase effort and motivation, but cannot increase skill instantly merely through the force of will. Performance pressure and other incentives can increase effort, which does not cause the effect of choking. These performances are more subjective to physical fatigue than skilled performances because they involve less conscious self-regulation that could lead to a decrease in performance overall. Defense will attain more of a home-field advantage than offense because of social facilitation. The arousal from performance pressure strengthens the dominant response of effort, increasing the advantage (Muraven, Tice, & Baumeister, 1998).

**Length of Season**

The season length can be divided into three categories: less than 50 games, 50-100 games, and more than 100 games played in a sport’s season. Season length has a significant effect on the home-field advantage by mediating the effect of sport through crowd density, crowd behavior, and referee bias (Agnew & Carron, 1994). With the increase in length of season, the less a home team will enjoy having a home-field advantage. Longer seasons decrease the importance of each game, which reduces the effect. The more games there are in a season, the more opportunity for people to come to games. Along with the limited home-field advantage, the length can also impact the player's’ motivation and fans’ behavior during games. Longer seasons contribute to less of a crowd size at each game along with the crowd being less dense and having less noise.

For example, soccer has a higher home-field advantage because of its shorter season length meaning that each game is very important and amplifies the effect from the crowd (Pollard, 1986). Baseball has a weak home-field advantage because the length of the season is very long. Each individual game is less important, which reduces the effect from the crowd (Schwartz & Barsky, 1977).

**The Future of the Home-Field Advantage**

Home-field advantage is very apparent throughout sports, with the home-field disadvantage becoming a thing of the past. The home-choke hypothesis has not been supported since 1984 (Baumeister & Steinhilber, 1984), which leads to the assumption that a home team performs better with a supportive audience at their home field no matter the circumstance. There are exceptions, but none that are directly related to the home-choke hypothesis. As of right now, we know that the specific moderators that contribute to a home-field advantage include the type of sport, the season length, the time era, and the position played in the sport.

In the future, more unexplored moderators can be tested to explore the effect of the home-field advantage further to determine when it is at its strongest and weakest moments. There is not one moderator or component that specifically causes a home-field advantage to occur. Instead, it is a combination of factors that causes a home team to become more successful. A supportive audience that is loud and large contributes the most to an advantage. The multiple factors of crowd density, crowd behavior, and crowd noise all make up a supportive audience and mainly affect an athlete’s performance. There have not been any previous studies that have focused on gender as a moderator because studies have mainly focused on male professional sports. More research could be done to see if gender has an effect.

The home-field advantage information is very easy to apply to everyday performances to give athletes an edge up over their competitors. The information is important for any individual who is involved or is interested in sports to know when to expect a small or large home-field advantage and what they can do to build a larger advantage. Coaches, players, and parents need to recognize the factors that can help eliminate certain consequences to better understand and influence the outcomes of games to their best advantage. For coaches, this information can be especially useful. If a team is playing away, coaches should have their team go to the opponent’s field the day before the sporting event to get more of a familiarity of the location and playing surface, especially before games with high importance. In addition, the coach may want to use the special tactic of not having their team play as cautiously. If the coach uses a more defensive approach when their team is away, this may cause the home team to have more of a territorial and psychological advantage, giving the home team an automatic home-field advantage (Pollard & Pollard, 2005).

For players, this information can help them become more psychologically ready before games. If they are positive and believe they are going to do well no matter the location of the game, they should end up performing to the best of their ability without overthinking what they need to do. Parents should attend more away games to counteract the unsupportive audience of the opponent’s fans to create more of a supportive audience for the away team. The additional supportive crowd size will add benefits to performance without the players even being aware of the change.

More current studies need to be done to discover what specifically causes a home advantage, how it affects the athlete to perform, and why specific sports produce different effects of the home-field advantage. With every game, there are unique characteristics that are hard to measure and can potentially happen out of chance. One of the additional characteristics that has little research done is the length of a team’s tenure or length at their current stadium and how it is correlated with the strength of the home-field advantage. By doing more research on this topic, we can help see how long it takes for a team to gain a home-field advantage once starting new at a different stadium. The issue is that less successful teams move more because they do not have a consistent fan base, which continuously causes a weaker home-field advantage for these teams. Another unique cause that needs more research is travel conditions and how it can affect the visiting team through the different modes of travel (i.e., bus, plane, or train), along with the distance traveled. Additionally, research on sports that have more of a player turnover, like American football, can be done to see if team dynamic plays a major role in comparison to the other three major American professional leagues. The effect can cause players to be less familiar of their venue by needing more of an adjustment period, which may be the cause of the decrease in their home advantage. By knowing these specific basics of what contributes to the home-field advantage, it can contribute highly to the individuals of the sports world and make the cause of the home-field advantage more precise.

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