

An Examination of the Homefield Advantage in a Professional English Soccer Team from a Psychological Standpoint

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Abstract

The aim of this investigation was to examine the underlying mechanisms of the homefield advantage within professional English football (soccer). Study 1 examined soccer players' retrospective perceptions of the homefield advantage. Results to this first study revealed that the players had significantly higher retrospective perceptions of their confidence, $t(4) = 2.24$, $p < 0.05$, and their positiveness towards the forthcoming game, $t(4) = 2.89$, $p < 0.05$, when playing at home. Study 2 investigated players' psychological and mood states immediately prior to competing at home and away using a shortened Profile of Mood States (POMS) within a semi-structured interview. Quantitative and qualitative measures were used to analyse the data from these interviews. Although no significant differences were found between the players' actual mood states prior to playing at home and away, data did show the players to have significantly higher perceptions of the team's confidence at home games, $t(4) = 2.82$, $p < 0.05$. Qualitative analysis highlighted the following themes as major factors contributing to their strong belief in a homefield advantage: physical and mental preparation, sleep, crowd factors and referee bias.

'Home advantage is the term used to describe the consistent finding that home teams in sport competitions win over 50% of the games played under a balanced home and away schedule' (Courneya & Carron, 1992: 13). Within sport there is considerable homogeneity in the reported magnitude of homefield advantage (Rosenthal & Rubin, 1982). The extent of this advantage, however, varies between sports. Examples of this variation between sports range from 53.5 per cent (baseball), to 57.3 per cent (American soccer), 61.1 per cent (ice hockey), 64.4 per cent (basketball), to 64.5 per cent in soccer, a larger factor than elsewhere (Courneya & Carron, 1992).

In soccer the home advantage is one of the longest established and most deep-rooted aspects of the sport's lore, yet remains the least understood (Pollard, 1986). It has been seen as an important factor in determining the outcome of a game, and research has highlighted that game location, home or away, is as good a predictor of outcome as team quality (Schwartz & Barsky, 1977; Snyder & Purdy, 1985) or scoring first (Courneya, 1990). It would appear that the question of whether the home advantage exists in sport has been clearly answered by the research. The more relevant and interesting, and as yet unanswered, question is why? Research attempting to identify the factors that contribute to the home advantage (cf. Agnew & Carron, 1994; Courneya &

Carron, 1990; Pace & Carron, 1992) has largely focused on four areas: crowd factors, travel factors, familiarity factors and rule factors.

The crowd factor has been examined based on the assumption that conditions associated with the audience, including its size, density, intensity, supportiveness and proximity, motivate the home team and lead to enhanced performance. The research that has addressed this area of the home advantage is divided in its conclusions. Some studies have found the crowd to have no effect on the home advantage (Dowie, 1982; Pollard, 1986), while others have found evidence to support the crowd factor (Agnew & Carron, 1994; Nevill, Newell, & Gale 1996; Schwartz & Barsky, 1977).

Many researchers have investigated the travel factor based on the assumption that travel is not only fatiguing but also disrupts familiar routines and habits. This explanation of the home advantage has intuitive appeal but tests of its validity have been largely inferred. The combination of the results of research on the travel factor (Courneya & Carron, 1992; Edwards & Archambault, 1989; Pace & Carron, 1992; Pollard, 1986) provides a basis for the generalisation that the impact of travel on the home advantage is minimal.

Studies have looked at familiarity factors such as size and nature of the playing surface (Pollard, 1986) and familiarity with the venue (Moore & Brylinsky, 1993) however, no empirical evidence to support this factor has been found. Research has also observed rules that may favour the home team (Courneya & Carson, 1992) but these are specific to certain sports and do not apply to soccer. More recently, research has documented that referee bias might contribute to the home advantage. Studies have highlighted that officials make more subjective decisions against visiting teams – or in favour of home teams (Glamser, 1990; Greer, 1983; Lefebvre & Passer, 1974; Lehman & Reifman, 1987; Nevill, Balmer & Williams, 1999; Varca, 1980). More research in this area is needed to substantiate this factor as contributing to the home advantage.

Little of the research conducted so far has postulated any substantial underlying mechanisms that may account for the home advantage. Recent research (Courneya & Carron, 1992; Terry, Walrond, & Carron, 1998) concludes that psychological responses to game location may play an important role in the homefield phenomenon, and that it is necessary to further investigate this relationship to gain a better understanding of the underlying mechanisms of the homefield advantage.

As a result of limited findings and proposed underlying mechanisms regarding the homefield advantage, the aim of this investigation, in accordance with Kerry Courneya and Albert Carron's (1992) suggestion, was to further both descriptive and explanatory aspects of this phenomenon. To this end, a professional English soccer team was examined at home and away fixtures. Team 'A' had won 25 games in the previous season, of which sixteen were at home, showing that they had won 64 per cent of their games at home and only 26 per cent of their away games.

The first in this sequence of studies examined players' retrospective perceptions of competing at home and away. The second study looked at the psychological and mood states of players measured immediately before home and away games, employing a semi-structured interview technique.

Study 1: Retrospective Perceptions of Competing at Home and Away

Method

Participants

Five players from the first XI of an English professional soccer team (Team A) were randomly selected from those who volunteered to act as participants (M age = 24.6 years, SD 2.3 years, M time at club = 11 years, SD 3.9 years, M time in professional soccer = 7.5 years, SD years).

Apparatus and procedure

In order to 'gain entry' into the club, for six months the data collecting researcher observed training sessions and interacted with coaches and players. Once rapport had been established between the researcher and the soccer club, a pilot study was conducted. Following the pilot study five players were selected for this study and were individually interviewed. Before commencing the interviews, participants signed an informed consent form highlighting the confidentiality of their responses. The first part of these semi-structured interviews asked the players to retrospectively rate six questions on a ten point Likert scale (1 = very much to 10 = not at all) regarding how they felt prior to home and away fixtures. These items were positive, anxious, fit, skilled, supported and confident. The selection of these items was based on findings from previous research. The second part of the interviews asked players to list the best and worst things that could happen in match preparation at home and away (Bray & Widmeyer, 1995; Jurkovic, 1985) and the best and worst aspect about competing at home and away (Bray & Widmeyer, 1995). Finally, the players were asked what they perceived limited both their own and the team's performance when playing away.

Responses were recorded and transcribed at a later date. Raw themes were then extracted from the transcripts. An impartial researcher performed a reliability check of the interpretative elements of the analysis by again reading through the answers and coding them into raw themes. Agreement between raters in terms of coding into themes was 94 per cent. The decision to use interview and not to use questionnaire was based on observations from the pilot study. The pilot demonstrated that the players responded in far greater depth in a verbal format as opposed to a written format.

Results

Four themes emerged from the data concerning the best things that could happen when preparing for a match. All participants cited sleep as the first

important factor in preparation. All players also reported good food as a main factor. Four of the five indicated the need to be and feel relaxed. Another factor which two of the participants mentioned was the need to drink plenty of fluids.

The participants found the worst things that could happen in preparation for a match to be the opposite of the best things. Again, sleep was the first factor mentioned by all of the participants, bad food was next. All of the players talked about strange conditions playing an important role in the negative aspects of preparation: 'being in a strange bed, being in strange surrounding'. Just not feeling right was also mentioned 'you want to feel right' or another player 'you don't feel well'.

Also included amongst the worst things about away fixtures was travel. Four of the five participants mentioned how draining the travel was. The participants argued that if they travelled the day before a fixture and could spend a night in the hotel it was much better than when they travelled on the day of the match and did not have time to adjust and settle down. The travel factor was also mentioned by two of the participants as a limiting factor to their performance when they play away.

The other themes that clustered with those on preparation included physical preparation conducted before home and away games. The players were somewhat divided in their preference. Three of the five claimed that they do the same thing, a lighter training session, the day before a game regardless of whether it is at home or away. Two of the players mentioned how when they are playing away that they train halfway through the journey at another training ground. This did not appear to be a popular method: 'I personally don't like it . . . you feel lethargic and you just want to rest . . . but all of a sudden you have to start training'. The other player voiced much the same opinion.

With regard to food prior to home and away games three of the players claimed to eat the same thing home and away and the other two claimed that it was different; one said it was better away in the hotel than at home and the other said it was terrible. This suggests that food is a personal point and players need to find what works best for them individually.

The best thing about playing at home for all participants was the home crowd. Two other themes emerged as being associated with playing at home and that was being in their own surroundings 'at home it's your own territory'. Two players also mentioned that they felt more positive when playing at home.

The negative side of playing at home was felt by three participants again to be the crowd, but only this time if they turned against the home side, If the home team is not playing well 'they're obviously going to be unhappy and it does generate onto the pitch'. Three of the players claimed that not getting a result at home was one of the worst things about playing at home and also two of the players talked about the game strategy and how bad it can be at home if the away team plays a too defensive game: 'when some teams sit back and defend and you really have to break them down. That's hard'.

All five stated that the best thing about playing away was that they are not expected to win. They felt that that was a challenge that they liked to face. The most rewarding aspect appeared to be that if they did win they felt even more satisfied than if they won at home, almost as if they had beaten the odds 'not expecting to win and if you do win it's a bonus'. Three of the players also felt that there was less pressure on them when they played away.

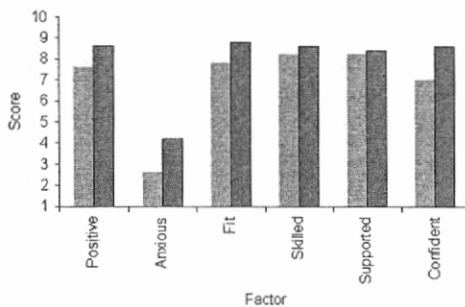
Each participant highlighted a different area that they perceived differentiated between home and away games. One participant talked about the different game strategies; he mentioned that when they play away, the home team comes at the away team during the first twenty minutes. The second participant talked about how 'obviously the home team has the advantage'. He did not say why the home team has the advantage but made it clear that he believed it to exist. A difference in surroundings was the main theme for another participant: 'different ground, different set up, and you're not familiar with it'. Another player similarly found the main difference to be in the surroundings, but rather with the accommodation than the actual ground and highlighted, for example, that they would not know what they would be eating or if the bed would be comfortable.

Much of the literature has looked at the effect of the crowd on the home advantage, and it emerged as a major theme in this study, being cited in all of the players' retrospective recollections of the differences between playing at home and away. All five participants posited that they felt more pressure when they played at home and that this was attributed to the home crowd. Three of the five players associated the crowd more with playing badly and the crowd getting to them 'if you're not playing well the crowd affects you'.

Paired sample t-tests using SPSS were conducted on scores between perceived mood at home and away, one-tailed tests showed that there were significant differences between three of the six factors: the players were significantly more positive at home, $t(4) = 2.892$, $p < 0.05$; significantly more confident at home than away, $t(4) = 2.236$, $p < 0.05$; and more anxious at home than away (this was in the opposite direction as predicted, as the test was one-tailed no statistical finding can be reported); there was no significant difference between the players perceived state of fitness at home or away, $t(4) = 1.633$, $p > 0.05$, or their perceived skills, $t(4) = 1.00$, $p > 0.05$, or their perceived levels of support $t(4) = 1.725$, $p > 0.05$ (see figure 1).

Discussion

The players professed to feeling more positive, confident and anxious at home as opposed to away. There were no significant differences between perceived fitness, skill or support at home or away. The overall theme that emerged from the data was that the players really believed in the home advantage, to the extent that they do not expect to win when playing away.



Note Away scores in light shading, home scores in dark.

Figure 1. Recollected emotions associated with playing at home and away.

It was surprising that there were no significant differences in how supported the players perceived themselves at home and away. It had been expected that the players would feel much more supported at home with the home crowd, which seemed to make a big impression on them, when in fact they found no difference in the support at home or away.

Some interesting themes emerged. The main theme concerning preparation was sleep and its importance the night before a game. It is intriguing that sleep was mentioned first, rather than a good training session or feeling in peak form. The worst thing in players' preparation was a bad night's sleep, which has implications for an applied perspective because it is essential for coaches to be aware of the best possible preparation for their players, so that the players can perform in peak condition. Sleep is something that could be worked on through relaxation to help players sleep as well away, as at home.

Travel was also a highlighted issue about away games. The players also claimed not to like stopping halfway en route to train the day before a game, especially if it is cold and wet. This again, may be helpful to coaches to know that this method of training puts the players ill at ease. Coaches may do well to consider other ways to prepare, such as in the morning before they travel.

The chief factor about playing at home appeared to be the home crowd for both positive and negative reasons. This provides support for previous research (Agnew & Carron, 1994; Edwards & Archambault, 1989; Nevill et al., 1999). Conversely, several studies did not find any evidence to support the crowd factor as a contribution to home advantage (Dowie, 1982; Pollard, 1986). These studies, rather, investigated the effects of crowd size and density, respectively, on home advantage. This study examined how players actually perceived the crowd to affect their behaviour, which is quite a different angle.

The results suggest that the crowd plays a significant role in the psychological states of the players as it was mentioned as both one of the most positive and one of the most negative aspects of playing at home. Previous research has not fully addressed how the players perceive the crowd affecting their behaviour in much detail. The players also felt they had more pressure on them when playing at home due to the home crowd. This was seen as a negative aspect of the home crowd. When the players were performing poorly, it was felt that the crowd accentuated their poor performance. Familiarity was mentioned as being an advantage of playing at home. Pollard (1986) concluded from his study that familiarity was an area in need of further investigation in connection with the home advantage. This study found further evidence to support this.

The existence of the perceived home advantage was the major theme that came to light from the data. All of the players argued that the best thing about playing away was that they were not expected to win. This whole concept goes against the psychology of competing. If a player commences a match feeling that they do not have to win and in fact are not expected to win, the reduced goal could be expected to increase the likelihood of reduced performance.

Although this study has shed some light on the major issues surrounding players' perception of the home field advantage, it only investigated retrospective perceptions of home and away competition, not the actual mood states or preparation when playing at home and away. It was necessary to conduct further research to compare the perceived differences between home and away matches to the actual differences in order to draw conclusions as to why the home advantage exists. This was undertaken in Study 2.

Study 2: Examination of Actual Moods, Preparation and Expectations Prior to Home and Away Games

Following from Study 1, the purpose of this Study was to examine the actual mood states of the players immediately prior to playing matches at home and away. The players' retrospective perceptions of competing at home and away could then be compared with their actual mood states, preparation and expectations, so that more comprehensive conclusions could be drawn as to the difference between playing at home and away.

Method

Participants

The same participants were used in this Study as in Study 1.

Apparatus and procedure

Players were interviewed prior to two home and two away games, matched in terms of opposing team. The first part of the interviews consisted of asking participants to complete a shortened Profile of Mood States POMS questionnaire. This tool required the players to rate on a five point Likert scale

(0 = not at all and 4 = extremely), how anxious, sad or depressed, confused, angry, energetic, fatigued they felt. Based on the results of Study 1, an item regarding the quality of the previous night's sleep was also included. Players were additionally asked to score on a 1 to 10 scale how well they felt the team would perform (team efficacy) and how confident they felt the team was as a whole. The second half of the interview consisted of questions based on the results of Study 1, additional themes highlighted in the pilot and previous research regarding what may affect players when competing at home and away. The interviews were conducted for each player separately and had to be kept short and to the point due to limited available time as the players were interviewed approximately two hours before the start of play, just after their pre-match meal, and just before they went down to get changed. Interviews were recorded and transcribed at a later date. Raw themes were then extracted.

Treatment of data

As in Study 1, the interviews were analysed using a combination of both quantitative and qualitative methods. Data from the two home and two away games were averaged. Likert scale data were compared using paired samples t-tests. Qualitative responses were examined by extracting key themes and comparing the responses prior to home games to those prior to away games.

Results

Training preparation

The players responded differently to the training that was carried out before home and away games. The training conducted the day prior to home games was always the same: a game of five-a-side and some shooting. One one occasion before an away game, the players had stopped en route and trained, whilst on the second occasion they had trained at home before they travelled. The players stated that they enjoyed stopping halfway: 'it was nice to have a break from the journey'. Yet, the next time when they trained before leaving the same player claimed that this was his preferred method: 'I'd rather do it that way to be honest, than train halfway up'. All the players, both at home and away, reported feeling well prepared for the matches. They replied in exactly the same way both home and away, with the exception of one player who hoped his lack of sleep away would not affect his preparation.

With regards to personal time that the players had before home and away matches, the responses were similar, suggesting that lack of time to relax was not an issue when travelling to an away match.

Sleep

There were large differences in players' sleep patterns when playing at home and away. When at home all players reported sleeping for a normal length of time if not longer. In one case, a player slept for twelve hours the night before a

home game. Conversely, when playing away all the players complained of sleeping poorly and of their sleep not being normal: 'it wasn't the usual sleep you know, with being in the hotel, different bed, pillows and that'. Another player complained that 'you can always tell the difference between a hotel bed to the one at home'. This is an important discovery as sleep was deemed as one of the most important factors by the players in their preparation.

Crowd factors

All the players believed that they would have the support of the crowd when playing at home, and none of them believed that they would have the support when playing away. One of the questions asked 'how do you think the crowd will respond today?' This question was meant in terms of the whole crowd, however, when the players were away, they only really mentioned the few supporters of their team rather than the crowd as a whole. When the team was at home, the players all believed that the crowd would be positive and get behind them. When away, they were far more elusive. One of the players talked about the crowd's response at home as treating the team 'quite positively', yet when asked the same question away both times replied 'I try not to think of the crowd too much'.

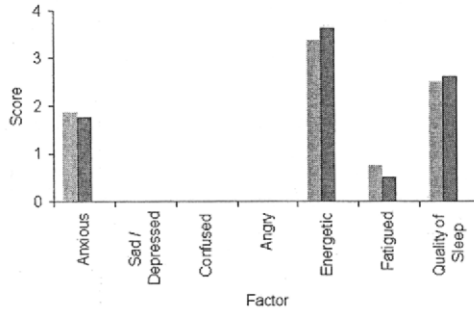
Referee bias

Results demonstrated that the players believed that the referee was more lenient towards them at home as opposed to away. All the players when playing at home maintained that 'normally at home the referee is quite good'. Another player argued 'away they are much harsher to the away side'. When playing away all the players stated that they were *not* expecting to be treated 'very well' by the referee.

Likert data responses

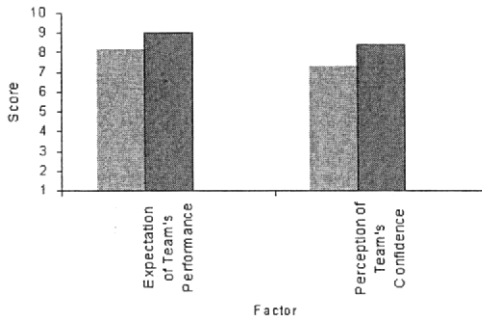
All the players scored zero on the POMS factors of Sad or Depressed, Confused and Angry. For the POMS factors of Anxious, Energetic, Fatigued and the quality of their sleep data, although no significant differences were apparent, means demonstrated that players felt slightly more fatigued, less energetic and more anxious when playing away (see Figure 2).

Comparisons between players expectations for the team's performance expected and perceived team confidence levels at home and away revealed that the players perceived the team to be significantly more confident at home than away, $t(4) = 2.82$, $p < 0.05$, with lower, but not significantly, expectations of the teams' performance away from home, $t(4) = 1.21$, $p > 0.05$ (see figure 3).



Note Away scores in light shading, home scores in dark.

Figure 2. Mean actual mood states of players competing at home and away.



Note Away scores in light shading, home scores in dark.

Figure 3. Players' expectation of team's performance and perception of team's confidence when competing at home and away.

Discussion

It had been expected that there would be a difference between the participants' mood states prior to playing at home and away, however, no significant differences were found. This is contrary to the results of Study 1, where significant differences were found in the retrospective accounts of home and away competition. The general trend of all the Likert data responses, however, was that the away profiles were more negative. These results provide support for Peter Hassmen and Eva Blomstrand (1995) who, using nine female soccer players, also found that pre-game mood scores did not vary in any systematic way between home and away fixtures. In contrast, Peter Terry and his colleagues (Terry et al., 1998) used the full POMS on one hundred male rugby

players and found participants scored significantly higher on vigour and self-confidence and significantly lower on tension, depression, anxiety, fatigue and confusion when playing at home. It could be that the full POMS is more sensitive than the shortened version. It was not possible within this study to use the full POMS as the time allowed with the players prior to the games was limited, and it would have been too intrusive to ask the players to complete the full POMS prior to playing a match. Thus, in support of Terry and his colleagues (1998) participants in this study did in fact score higher on energetic and lower on anxious and fatigue scales at home, but these differences were not significant. This lack of significance may possibly have been related to the small number of participants, due to the nature of the investigation.

From examination of the more qualitative data, there appeared to be some confusion in how the players preferred to train the day before away games. In Study 1, players claimed not to like stopping en route and training. In this study, the players were interviewed before the first away game and had stopped en route the day before to train, and yet all on the day claimed to have enjoyed it. But then when they trained at home before the second away game, the players acknowledged that they preferred this method of training.

One of the main themes to emerge from the data in both studies was sleep. In Study 1, all the players reported the importance of sleep in their preparation. In Study 2 the players reported sleeping very well prior to home matches, but not at all well in hotel beds before away matches. This is a valid point for coaches. These results suggest that a main contributor to the home advantage may well be the basic human requisite of sleep. Players all complained that when travelling they just did not sleep properly, for the normal length of time or in the usual way. If sleep is a crucial part of the preparation, then a bad night's sleep could contribute the players not performing at their optimal level. According to Robert Weinberg and Dan Gould (1999) fatigue results in impaired decision-making, lack of focus and intensity, and other mental breakdown. If the quantitative data is examined related to quality of sleep, however, it can be seen that there was only a very slight decrease in quality when competing away. This again reflects the inconsistencies shown in this investigation between actual and respective accounts of competing at home and away, and between quantitative and qualitative data.

The crowd was an another major influence on the players' psychological states, as was found in Study 1. These results provide support for previous research; Alan Nevill and his colleagues (Nevill, et al., 1996) found that crowd size affected players' behaviour in the number of send-offs and penalties scored by the home side. This was highlighted by the participants of this study being somewhat elusive when asked about the crowd prior to away games, yet were quite willing to talk about the crowd prior to home games. It might be that players were trying not to focus on the crowd when playing away because they knew that most spectators would be against them. Further research is needed to

substantiate this. The assertion that the home crowd had an effect on referee's behaviour was confirmed by all the participants in this study, who felt that the referee was biased in favour of the home side (Nevill, et al., 1999).

Conclusion

The combined results of the two studies suggest that participants believed that playing at home provided them with an advantage. Four major themes emerged as areas the players' perceived to affect the home advantage: training preparation; issues related travel and accommodation; crowd factors; and referee bias. These findings fit well with observations from other researchers such as Kerry Courneya and Albert Carron (1992) who suggested five main areas: crowd factors, travel; familiarity factors; rule factors; and referee bias. Previous research addressed these factors by investigating the processes such as, crowd size and density (Dowie 1982; Pollard, 1986), distance travelled and pitch sizes (Pollard, 1986), rather than the effects of these factors on the psychological states of the players. The results of this investigation suggest that with respect to the crowd factor, it is neither the size nor the density of the crowd that alters the home advantage, but the attitude of the crowd and whether or not they support the team.

This study suggests that the distance travelled is not an important factor, but rather the fact that the team has had to travel at all has an impact on the psychological state of the players. Either they have been sitting on a bus for several hours or else they have stayed the night in a hotel. In each case, they have been removed from their familiar surroundings and routines, which, the players reported, put them ill at ease.

In terms of the familiarity factor, previous research investigated the size of the home pitches (Pollard, 1986), however, this may not be as important as the psychological impact on the away team of not being in their own territory or surroundings. It may not be the difference in the size or slope of the away pitch that contributes to the home advantage, but the psychological effect of knowing that the players are not at home, not in front of their home crowd and knowing that they are not expected to win. When examining the home advantage from a psychological standpoint rather than a factual approach, possible reasons for the home advantage become clearer. Bearing in mind that the away team has to travel and compete on another team's territory, after probably having had a bad night's sleep, knows they are not expected to win, must go out onto the pitch knowing that the majority of the crowd against them, believes that the coaches and fans do not expect them to win, and believes that the referee will be against them, it is not surprising that the away players have lowered self confidence and that the home advantage exists.

With regard to mood states prior to home and away matches, no consistent significant effects were observed, though the trend was that the away profile appeared to be more negative. Possibly of more interest were the

apparent contradictions between the quantitative POMS data and the qualitative data. For example the players expressed great concern regarding getting sufficient sleep at away fixtures (sleep was considered as part of the travel and accommodation factor). If the Likert data for the quality of sleep at home and away matches is examined, however, it can be seen there was in fact only a slight decrease in reported quality of sleep at the away matches. Further inconsistencies can be seen between the retrospective data and data taken immediately prior to the games.

The final point is the suggestion that measures of player's and referee's performances upon the pitch in home and away situations need to be examined. It might be that emotional differences between home and away games for players could be masked by coping strategies to maintain emotional control, however, actual performance on the pitch may well vary between home to away environments. The nature of any change in performance, or even strategy of play, would surely be interesting. Furthermore, due to the centrality of the referee and the consistent suggestion throughout this paper that the crowd does affect the decision making of the referee, that notational assessment of soccer officials may well significantly contribute to furthering our understanding of the process behind the home-field advantage.

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