

Athletes' Perceptions of the Home Advantage: An Investigation of Perceived Causal Factors

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Although the home advantage in sport competitions has been consistently documented in over twenty years of research, factors that contribute to the home advantage have seldom been investigated. Courneya and Carron (1992) have proposed a framework for game location research, however, the game location factors identified in this model were based on the results of archival research and have not been validated with research involving participants who are presumed to be influenced by such factors. The purpose of the present study was to examine intercollegiate basketball players' perceptions of (a) game location factors they believed influenced their team's performance, (b) the influence that game location factors in Courneya and Carron's (1992) model had on their team's performance, and (c) their team's collective efficacy (Bandura, 1997) when playing at home compared to away. Athletes reported familiarity with the home court, the home crowd, and travel demands were important game location factors. Familiarity with the home court and home crowd support were perceived to have had the greatest influence on team performance. Collective efficacy of teams was also perceived to be greater when playing at home compared to away. Results provided support for the validity of game location factors identified in Courneya and Carron's (1992) model and suggest that collective efficacy is among the critical psychological states that may be influenced by game location.

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In the sport environment, it has been consistently demonstrated that a home advantage exists in major team sports (cf. Courneya & Carron, 1992). Specifically, home winning percentages in professional and collegiate leagues have exceeded the 50% that would be predicted by chance when playing balanced home and away schedules. For example, Schwartz and Barsky (1977) found a 66% home advantage in the National Hockey League and a 67% advantage in the National Basketball Association. Also, home advantages of 55% and 53% have been found in the National Football League and Major League Baseball respectively (Pollard, 1986). At the college level, Silva and Andrew (1987) found a 70% home advantage in National Collegiate Athletic Association (N.C.A.A.) basketball and Courneya (1990) reported a 62% home winning percentage in N.C.A.A. baseball.

In a framework of game location research, Courneya and Carron (1992) presented four game location factors which were identified as possible contributors to the home advantage (a) home crowd, (b) familiarity with the venue, (c) effects of travel, and (d) rules (e.g., batting last in baseball). However, despite the fact that each of these factors has intuitive appeal, anecdotal acclaim, and even some empirical support, there is not strong evidence to indicate that any of these factors alone, or in combination, determines the home advantage (Courneya & Carron, 1992). Thus, while the literature provides ample statistical evidence that a home advantage has been present in numerous sports at a variety of levels of competition, there has been no clear explanation to account for the existence of such an effect.

One shortcoming of home advantage research is that no studies have been found that have asked athletes themselves to serve as active agents in the research process (e.g., Sherif & Sherif, 1969) in examining game location factors that may have an influence on performance. Specifically, it has not been determined if athletes actually believe they have an advantage when they play at home, and if so, why they feel such an advantage exists. The examination of athletes' perceptions of game location factors that they believe influence their team's performance serves two important functions. First, obtaining such information provides a test of the validity of the game location elements purported in Courneya and Carron's (1992) home advantage framework. Second, evidence as to which game location factors are perceived, by athletes, to have the greatest influence on team performance would help to determine the relative importance of game location factors and identify areas of (a) potential intervention and (b) future explanatory home advantage research. Therefore, the primary purpose of the present study was to assess athletes' perceptions of the home advantage in their sport and to examine athletes' beliefs as to what game location factors contribute to a home advantage for their team.

In order to investigate athletes' perceptions of the home advantage and the influence of game location factors on team performance, a sport with a substantial home advantage was

sought. Canadian women's intercollegiate basketball was selected on the basis of previous research that has documented a home advantage of 72.2% in that sport (Kozub & Corlett, 1990). Recognition of the home advantage by the sport media and the consistent empirical findings of a home advantage across major professional and college sports (Courneya & Carron, 1992) led to the hypothesis that basketball players perceive teams have a home advantage in their sport. However, due to the exploratory nature of the research, no hypotheses were made with regards to the perceived importance of game location factors.

Courneya and Carron (1992) have suggested that the effects of game location factors on team performance are mediated by critical psychological and behavioral states of players, coaches and officials. Despite a lack of published research on psychological factors and the home advantage, Courneya and Carron noted that one psychological state that has been examined from a game location perspective is players' confidence. In an unpublished study, Jurkovic (1985) found that 76% of 74 basketball players surveyed reported their self-confidence was greater when they played at their home court compared to when they played away. However, the Jurkovic (1985) study was limited somewhat in that only individual players' perceptions of their personal self-confidence were assessed. Basketball is an interactive team sport in which each individual's play is continuously integrated with that of teammates such that effective team play and team outcomes (i.e., winning or losing) are the pertinent measures of performance. Although individual players' self-confidence may be affected when playing at home, the fact that the home advantage in basketball is a team phenomenon suggests that team members' perceptions of the team's shared confidence in the team's abilities, or, collective efficacy (Bandura, 1997; Zaccaro, Blair, Peterson, & Zazanis, 1995) is a more important construct to assess when examining a team's performance or home advantage. Moreover, according to Bandura (1997), in highly interdependent systems such as basketball teams, perceptions of the team's efficacy may be more strongly related to team performance than aggregated perceptions of individual efficacy. Thus, the second purpose of the study was to extend research on critical psychological states within Courneya and Carron's (1992) framework by examining players' perceptions of their team's collective efficacy when playing at home compared to away. Previous research found that individual players were more self-confident when playing at their home court (Jurkovic, 1985), therefore, it was hypothesized that basketball players perceive their teams have greater collective efficacy when playing at home than when playing away.

Method

Forty female basketball players from four of the eight intercollegiate teams competing in

the Western Division of the Ontario Women's Intercollegiate Athletic Association (OWIAA-West) volunteered to participate in the study during the 1994-95 season. Athletes' mean age was 20.82 years ($SD = 1.08$) and the average tenure on their present team was 2.13 years ($SD = 1.13$).

Players completed a single questionnaire at the end of their regular-season competitive schedule. The questionnaire consisted of four separate sections. The first section determined if players perceived a home advantage existed in their sport. Specifically, players were asked to estimate the average home winning percentage across their league for the season as well as the percentage of home games their own team had won.

Traditionally, in home advantage research, when an observed home winning percentage exceeds the 50% that would be expected due to chance, it is concluded that a home advantage exists (Courneya & Carron, 1992). This measure usually represents an average for all teams across an entire league (e.g., Schwartz & Barsky, 1977). While this methodology provides an adequate test of the home advantage for a league of teams, it may well be that any one team may not have won more than 50% of their home games simply because they were a weak team. However, despite the fact that a team may have won fewer than 50% of their home games, it may have experienced a type of home advantage if it won a greater percentage of home games than away games. This is an important consideration for home advantage research because in order to examine actual sport teams, all teams are not likely to have had home winning records of greater than 50% (cf. Bray, 1999). Examination of game location, psychological, and behavioral factors at home compared to away at an individual team level also allows insight into the extent to which these factors may vary as a function of home and away status, rather than limiting investigation to home games only. Thus, in sections two through four of the questionnaire, in order to examine players' perceptions of game location factors and their team's collective efficacy, the traditional measure of the home advantage (i.e., the home winning percentage) was replaced by the relative comparison of playing at home versus away (i.e., the perceived likelihood of a team winning at home compared to the likelihood of winning away).

In section two, athletes were instructed: "if you believe that your team's chances of winning are greater when playing at home than when playing away from home please indicate WHY you think this is so". If players responded affirmatively to this question, they went on to list, in an open-ended format, why they thought their chances of winning when playing at home were greater than when playing away. If players responded negatively, they were instructed to ignore this section and move on to section three.

In section three, athletes indicated the magnitude of influence they attributed to the game location factors identified in Courneya and Carron's (1992) home advantage framework. The perceived influence of each game location factor for both home and away competition was

assessed. This strategy was adopted because game location factors such as the home crowd and court familiarity may have an influence on both home and visiting teams. For example, the home crowd may cheer and support the home team such that this behavior is perceived to have a positive influence on their play (Schwartz & Barsky, 1977). However, the home crowd may also be a factor that works against visiting teams by deliberately disrupting play with noise or taunting visiting players and, therefore, may be perceived to have a negative influence on visiting teams. Therefore, in this section, athletes were asked to indicate, on 11-point scales anchored at $-5 =$ hurts our play a tremendous amount, $0 =$ no effect, and $+5 =$ helps our play a tremendous amount, the perceived influence of (a) the audience when playing at home, (b) the audience when playing away, (c) familiarity with the home court, (d) lack of familiarity with an away court, (e) traveling for an away game, and (f) rules of the sport on their team's performance.

In the fourth section, collective efficacy was assessed. Players indicated their perceptions of their team's confidence in the team's abilities to perform such team skills as causing turnovers, executing offense, playing defense, executing presses, and breaking presses as well as their team's confidence in their overall playing abilities. The collective efficacy scale consisted of 10 items in total. Collective efficacy items were developed with the assistance of experienced intercollegiate basketball coaches, providing strong face validity for the scale. For each question, athletes rated their perceptions of their team's collective efficacy when playing at home as compared to when playing away on 11-point scales anchored at $-5 =$ tremendously less confident, $-2.5 =$ slightly less confident, $0 =$ no difference, $+2.5 =$ slightly more confident, and $+5 =$ tremendously more confident.

Results

Athletes' Perceptions of the Magnitude of the Home Advantage

Athletes perceived there was a home advantage within their women's basketball league. Specifically, players estimated the home winning percentage across their league to be 60.6% ($SD = 9.3$) which was slightly higher than the actual home winning percentage of 55.3% ($SD = 27.7$) calculated from league records. Players' estimates of their own team's home winning percentage also indicated a perceived home advantage, ranging from 40% to 80%, with an average of 59.6% ($SD = 16.8$). Estimates of individual teams' home advantages were also marginally higher than the actual average home winning percentage of 54.2% ($SD = 8.5$) and ranged from 50% to 67%. Thus, in terms of the traditional measure of the home advantage (i.e., a home winning percentage that exceeds 50%), the hypothesis that athletes believe their teams had a home advantage was supported.

Athletes' Identification of Important Game Location Factors

Every player in the sample reported that they believed their team's chances of winning were greater when playing at home than when playing away. Players also listed multiple reasons as to why their team was more likely to win when playing at home compared to away. The mean number of reasons provided was 3.4 per athlete ($SD = 1.6$). Familiarity with the home court was the most frequently cited reason, representing 39% of all responses. However, athletes were prone to distinguish between a generalized feeling of familiarity with the venue (18%) and familiarity with more specific, unique characteristics of their home court such as lighting, rim tension, baskets and boards (21%). Players also reported that support from the home crowd was an important factor (27% of responses). Not having to travel prior to a game was also frequently listed (17%). The remaining 17% of responses were too diverse to be categorized. Thus, with the exception of rules, game location factors identified by players were identical to those that have been advanced in Courneya and Carron's (1992) home advantage framework.

Athletes' Perceptions of the Influence of Game Location Factors

Results of section three, in which players indicated the importance of each of the game location factors in Courneya and Carron's (1992) framework (i.e., fan support, court familiarity, travel effects, and rules) are presented in Table 1. Players felt that the most influential game location factors were their familiarity with the court and the support of the home fans ($M = +2.7$, $SD = 1.4$ and $M = +2.6$, $SD = 1.2$, respectively). Other factors assessed might be better described as a visitor disadvantage, as they would be more directly harmful to the visiting team rather than helpful to the home team. Specifically, athletes felt that having to travel prior to a game was harmful to visiting teams' performance ($M = -0.7$, $SD = 1.9$). Lack of familiarity with the court and the influence of fans were also considered to be detrimental to the performance of visiting teams ($M = -1.0$, $SD = 1.2$ and $M = -0.8$, $SD = 1.2$, respectively).

Table 1 presents the results of a series of independent t-tests which revealed that the reported influence of home crowd, away crowd, home familiarity, and lack of familiarity away were each significantly ($ps < .001$) different than zero. It is noteworthy that the travel factor, while in the predicted direction (i.e., negative influence) was significant ($p < .05$). However, due to the number of t-tests performed and the associated risk of Type I error, this result should be interpreted with some caution. None of the athletes indicated that rules had any influence on team performance at home or away and no other game location factors were listed in the additional spaces provided.

Table 1
Magnitude of Perceived Influence of Game Location Factors on Team Performance

Game location factors	Perceived influence of game location factor on team performance			
	<i>M</i>	<i>SD</i>	<i>t</i>	<i>p</i>
Home crowd	2.6	1.2	13.1	.001
Home-court familiarity	2.7	1.4	11.9	.001
Travelling to play away	-0.7	1.9	-2.1	.043
Away crowd	-0.8	1.2	-4.1	.001
Away-court familiarity	-1.0	1.2	-5.3	.001
Rules	0.0	—	—	—

Note. $N = 40$. No rules were identified by athletes as influential factors in the home advantage, therefore, no data pertaining to rules were available.

Collective Efficacy and the Home Advantage

In section four, athletes rated their perceptions of their team's collective efficacy for overall play and for specific basketball team skills when playing at home compared to away. Because the collective efficacy scale was a newly constructed instrument, the internal consistency of the scale was examined and found to be acceptable (Cronbach's Coefficient Alpha = .92). Athletes reported that their teams were more efficacious in their overall play and specific team skills when playing at home versus away for all of the team skills assessed (i.e., range of individual item scores = +1.2 to +2.6). The scale average of collective efficacy when playing at home compared to away was +1.6 ($SD = 1.0$) which was significantly greater than a null effect, $t(39) = 9.31, p < .001$.

Discussion

The purpose of the present study was to examine players' perceptions of the home advantage in Canadian women's intercollegiate basketball. Results demonstrated that athletes believed there was a substantial home advantage in their league of greater than 60%. Furthermore, players indicated that for their own teams, a greater percentage of home games were won than lost (i.e., 59.6%).

Basketball players in this study identified several game location factors that they believed were influential with regards to their team's home advantage. Specifically, with the

exception of rules of the sport, these athletes reported the same game location factors that have been advanced in Courneya and Carron's (1992) review of archival research. Home court familiarity, fan support, and travel were all believed to be associated with the home advantage to varying degrees. These findings lend support to the validity of the game location factors in Courneya and Carron's (1992) model. However, contrary to the opinions of many home advantage researchers (e.g., Schwartz & Barsky, 1977; Zeller & Jurkovic, 1988), who have suggested that the crowd is the most influential game location factor, athletes in the present study cited home-court familiarity most frequently and believed it to be slightly more influential than the home crowd.

In one previous study, Pollard (1986) found no evidence of the contribution of familiarity to the home advantage (i.e., the home advantage was consistent across the teams in English Football League despite substantial variations in the size of pitches, stadia, and composition of playing surfaces). In spite of these negative findings, however, Pollard still believed familiarity to be a potent factor. Indeed, Pollard suggested players' familiarity with more subtle characteristics of the environment such as the background of the goal and alignment of the stands in relation to the pitch were important contributors to the home advantage in soccer. Results of the present study provide support for Pollard's contention that players' familiarity with the venue is an important game location factor. Furthermore, basketball players reported that global familiarity with the home venue and familiarity with more discrete aspects of the basketball court were separate dimensions of this game location factor. Specifically, players consistently indicated that being familiar with the home court, in general, and familiarity with more subtle characteristics of the court (e.g., "knowing" the rims and boards) were different factors that influenced their team's performance. Thus, results indicated that future explanatory research on the home advantage might further investigate players' familiarity with their home venue.

Regarding the magnitude of the influence that game location factors had on their team's performance, athletes reported that familiarity, fan support, and travel were each influential. These findings support Courneya and Carron's (1992) contention that several factors may operate in an additive manner to influence the home advantage. It is also important to note that while players perceived court familiarity and fan support to help them when competing as a home team, a lack of familiarity, lack of fan support, and burden of travel were also recognized as disadvantages for visiting teams. This was a unique finding in comparison to existing home advantage research, particularly because game location factors have typically been considered from the perspective of home teams only (e.g., Schwartz & Barsky, 1977). However, from the athletes' perspective, some factors were believed to be influential for both home and visiting teams, not just the home team. These findings have implications for the Courneya and

Carron (1992) framework in that game location factors such as familiarity (learning) and crowd could be multi-dimensional from the players' perspective and each sub-factor may have an independent influence on home and visiting teams.

Players' reports of their teams having greater collective efficacy at home compared to away extended existing research on players' psychological states and the home advantage. Although collective efficacy is a relatively new concept in sport research, recent research (Paskevich, 1995) found that at the team-level, collective efficacy was positively related to team performance outcomes in intercollegiate volleyball. While teams in the present study had only a slight home advantage for the season when the traditional measure was utilized (i.e., average home winning percentage = 54.2%), a comparison of home winning percentages to away winning percentages also indicated that, on average, teams won more than 12% more games (i.e., 2 games) at home ($M = 54.2\%$) than they won on the road ($M = 42.0\%$). While the small number of teams in the present study made a team-level analysis impractical, greater collective efficacy was perceived at home - a finding that was consistent with superior home-court performance. Thus, findings support the inclusion of collective efficacy as a critical psychological state in Courneya and Carron's (1992) home advantage framework. However, future research should further examine the relationship between collective efficacy and performance when teams compete at home and away.

In the present study, athletes (a) identified which game location factors they perceived were important to their team's performance, (b) estimated the magnitude of influence game location factors had on their team's performance, and (c) rated their team's collective efficacy when playing at home compared to away. We should caution, however, that perceptions of the home advantage reported by this sample of athletes (i.e., 40 players from four teams in one league) may not be directly comparable to other samples. The perceived influence of crowd support, familiarity, travel, etc. may vary substantially across sports, leagues, and teams. For example, home-court familiarity was reported to be as influential as the home crowd by players in this study. However, athletes in this sample, unlike college or professional players in other leagues (e.g., N.B.A.; N.C.A.A. Division I), did not experience large crowds at their games. In fact, audience sizes for regular season contests were usually smaller than 200, possibly making the influence of fans somewhat negligible. In contrast, teams that draw large, supportive crowds to their games might perceive the home advantage to be more attributable to the support of their home fans. Similarly, athletes who have to travel a great deal before games might consider that factor to be of greater importance. Visiting teams in this sample typically traveled for less than three hours prior to away competitions during the regular season.

The existence of a home advantage has been a consistent finding across sports. However, efforts to explain the phenomenon have been somewhat tenuous (Courneya & Carron,

1992). Understanding the mechanisms by which the home advantage comes to exist may be enhanced by tapping into the perceptions of the athletes who are directly involved. For practitioners and coaches it may be important to assess their own players' perceptions of the home advantage in order to design interventions which will maximize the positive factors associated with playing at home and minimize the negative aspects of playing on the road.

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