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# Aggressive Behavior and Home Field Advantage in Italian Serie A Soccer

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## Introduction

Home field advantage describes the phenomenon where teams across all sports win the majority of their games. Thomas, Reeves, and Smith (2006) recently investigated home field advantage in the English Premiership. They found that home field advantage was a factor only in yellow cards given to away teams and not for penalties given to teams.

## Method

The purpose of the present study was to determine the home field advantage for Italian *Serie A* teams. Following the format of Thomas, Reeves, and Smith (2006), penalties awarded to home and away teams, yellow cards, and red card ejections over four seasons and 2892 games in Italian first division soccer from 2003-2007 were examined.

## Data Collection

Data were collected through the Internet archives of *Raisport* and *La Gazzetta dello Sport*. Yellow cards and red cards were recorded for each team over the four seasons of 2003-2004, 2004-2005, 2005-2006, and 2006-2007. In addition, home and away penalties given to each team were recorded. Finally, the end-of-season rankings for each team were collected.

## Data Analysis

The resulting data were analyzed through ANOVA, chi square, Pearson correlation, and regression. The results indicated a significant home field advantage for teams in the awarding of penalty kicks ( $p < .001$ ). In addition, correlations were conducted for team classification and yellow and red cards received. Team classification was found to be a significant predictor of yellow cards received. There was a moderate correlation of yellow cards and team classification ( $r = .482$ ,  $p = .01$ ) as well as red card ejections and team classification ( $r = .513$ ,  $p = < .01$ ).

Table 1: Frequency and Distribution of Aggressive Behavior during Italian Serie A Seasons 2003-07

Season	03-04	04-05	05-06	06-07
Yellow Cards	1320	1719	1672	1525
Red Cards	95	127	125	119
Penalties				
Home	63	65	74	54
Away	37	44	47	38

The data support several possible explanations for the advantage of penalties, home field, and rank. The most popular reasons for these findings in the literature are explored, including more aggressive behavior by away teams, referee subjective decisions in favor of the home team, the perception of higher ranked teams as being more talented and less aggressive, the possible unevenness of talent in the highest and lowest teams in the classification, and the effect of the crowd on both the referee and the teams.

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