

# THE RELATIVE AGE EFFECT AMONGST 2,999 PROFESSIONAL SOCCER PLAYERS IN ENGLAND IN 2004/2005

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## INTRODUCTION

The relative age effect (RAE) is a key factor in the development of academic and sporting talent (Musch and Grondin, 2001). It refers to the notion that children born immediately after a cut off date are advantaged by a difference of up to twelve months in age between themselves and their peers in the same age classification (Vaeyens et al., 2005). Evidence suggests that there is a strong relative age effect in professional soccer and has been demonstrated at both a junior and senior level (Brewer et al., 1992; Musch and Hay, 1999; Littlewood, 2005). However, there are limited studies that have explored the RAE at a single time period. This paper explores the RAE for all players registered with English professional soccer clubs in all domestic leagues (i.e., Premiership, Championship, League One and League Two) in the 2004/2005 season. Specific sub-group analysis focuses on playing position, playing standard, team success (top and bottom three final league positions), player acquisition (i.e., product of youth development or a signing) and international experience.

## METHODS

Data was collated via a number of official player directories (i.e., Sky Sports Soccer Yearbook 2005-2006) and systematically inputted into the Statistical Package for Social Scientists (SPSS V12). The coding of specific variables in the database enabled the effective management and analysis of a vast amount of quantitative data (2,999 entries). Players were grouped into one of three categories according to the proximity of their month of birth from their national selection cut-off date (i.e., early, middle, late). The chi-squared statistic was used to examine differences between observed and expected birth date distributions obtained using calculated means from the Office of National Statistics.

## RESULTS

A strong relative age effect was found in English professional soccer ( $X^2(11) = 187.85$ ;  $p < 0.05$ ) providing robust evidence for the cut-off date in youth soccer as the main cause for the relative age effect in professional soccer. The results showed a significant association between player acquisition and birth date ( $X^2(2) = 38.84$ ;  $p < 0.05$ ). Players from youth development systems demonstrated a distinct birth date bias towards the first third of the selection year, however signed players had a more even distribution. Successful teams contained more players born in the first selection third compared to unsuccessful teams ( $X^2(2) = 8.80$ ;  $p < 0.05$ ). Equally, youth international players showed a more skewed distribution compared to full international players. No significant differences were observed between different leagues or playing positions.

## DISCUSSION

Comprehensive analysis of the data indicates that not all players are subject to a birth date bias. Previous studies have failed to discriminate amongst specific variables whereas the present study provides a more focussed and systematic approach to the phenomenon. In this sense, no previous study has examined the RAE between different types of player acquisition or its effect on team success. It would appear that youth development

systems are a major cause of the skewed birth distribution, but it is proposed that the effect is an interplay of cognitive, physical, motivational and emotional factors. Whilst the RAE is of great importance, it is not the defining concept that causes the discrimination. Future research direction needs to consider the role of mastery, self-esteem, maturational development and deliberate practice. Several proposals to reduce or eliminate the RAE have been suggested, however most importantly, awareness of the transient nature of maturity on talent identification and selection is essential. The findings provide a platform for further research in the areas of player acquisition and team success.

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