



**The Relative Age Effect and Post-Covid  
Grassroots Football Participation**

**2020**

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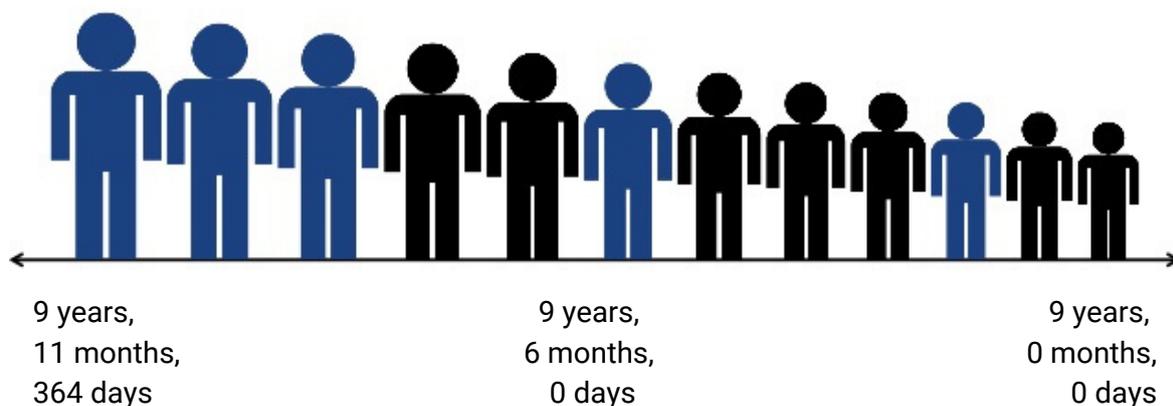
## 01 WHAT IS RELATIVE AGE EFFECT?

Dr Laura Finnegan<sup>1</sup> is one of the world's leading Relative Age Effect (RAE) experts in football, and she most eloquently describes RAE as "a preference for selecting footballers born earlier in the year, often due to enhanced maturational factors (being bigger, faster, stronger physically but also are often more cognitively and emotionally mature) over their teammates born later in the year."

As the graph developed below by Laura demonstrates, there is potentially the difference of a year's growth between youth players in the same section year.

We, therefore, refer below to players born in quarters of the selection year.<sup>2</sup>

### RELATIVE AGE EFFECT, VISUALISED



<sup>1</sup> <https://talentdevelopmentinirishfootball.com/2017/06/27/relative-age-effect-in-irish-elite-youth-football/>

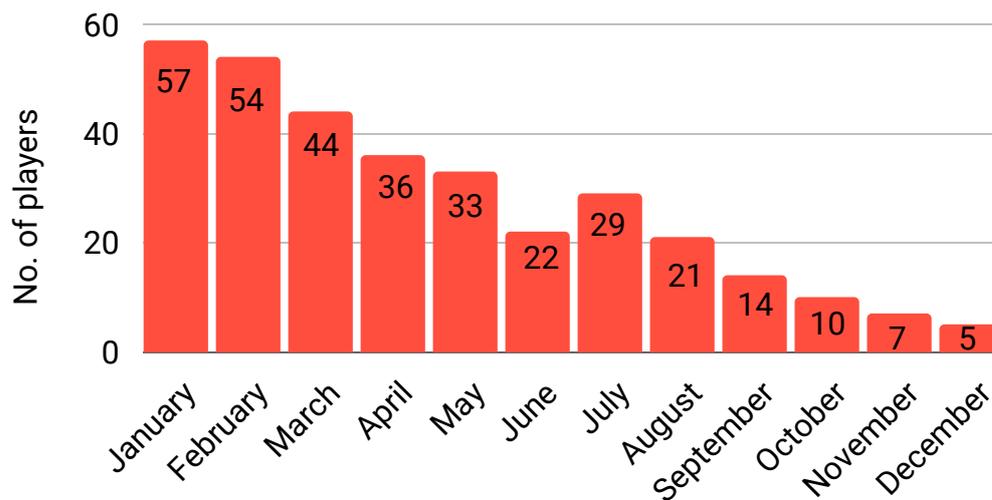
<sup>2</sup> If the selection year starts on January 1st then the four quarters would be Quarter 1 (Q1) = Jan–March; Q2 = April–June; Q3 = July–September and Q4 = October–December

## 02 WHY IS RELATIVE AGE EFFECT SO IMPORTANT POST-COVID?

### 2.1 Selection

There is considerable evidence<sup>3,4</sup> that RAE affects the selection of young male and female football players. A recent example from the 2019 UEFA Under 17 Finals Tournament, shows almost half of the players (47%) from 16 international teams were born in Q1 and only 6% in Q4.

### MONTH OF BIRTH (EURO U17 CHAMPIONSHIPS 2019)



According to Musch and Grondin,<sup>5</sup> competition is a necessary pre-condition for RAE to emerge. Thus if there is no selection and no competitive selection year, RAE will not be evident. Musch and Grondin also noted that “the larger the pool of potential players, for a given sport in a given category, the stronger the resulting RAE should be.” So, RAE will be more prevalent where there is a selection from a large pool of players rather than from a smaller pool of players.

<sup>3</sup> Pål Lagestad, Ingebrigt Steen, Terje Dalen, “Inevitable Relative Age Effects in Different Stages of the Selection Process among Male and Female Youth Soccer Players”, *Sports (Basel)* 2018 Jun; 6(2): 29.

<sup>4</sup> Manuel Jacob Sierra-Díaz, Sixto González-Villora, Juan Carlos Pastor-Vicedo and Jaime Serra-Olivares, “Soccer and Relative Age Effect: A Walk among Elite Players and Young Players”, *Sports* 2017, 5(1), 5.

<sup>5</sup> Musch, J., & Grondin, S. “Unequal competition as an impediment to personal development: A review of the relative age effect in sport”, *Developmental Review*, 21, 147–167, 2001.

## 2.2 Retention

The evidence below also shows that young grassroots football players born in Q3 and Q4 are more likely to drop out than players born in Q1 and Q2.

Delorme<sup>6</sup> reviewed data at the end of the 2007–2008 season using the birthdates of **363,590** French male players licensed during the 2006–2007 season but who had not renewed their licence for the following season. The data was collected through the database of the French Football Federation.

For the crucial Under 9 age range, the dropout rate for Q3 and Q4 birthdates was **12%** greater than Q1 and Q2 birthdates. At Under 11 and Under 13, the difference was **8%** at each age range. So across the Under 9 to Under 13 age groups, the data shows a **30%** greater dropout rate for Q3 and Q4 birthdates.



Research by the Dutch FA (KNVB)<sup>7</sup> with several thousand players—for boys and girls aged 5-12 years of age—showed that players born in Q3 and Q4 were 20% more likely to quit playing.



In a study of young Belgian grassroots players in 1998, Helsen<sup>8</sup> found that from 12 years old, there were a higher number of dropouts from those players born toward the end of the selection year.

As reported in their excellent book "The Best: How Elite Athletes Are Made,"<sup>9</sup> Williams and Wigmore quoted evidence in the English academy system that Q1 birthdates were retained in an academy four times longer than Q4 boys.

Thus, if we view drop out rates of grassroots footballers, we must acknowledge that the pool of players is already likely to be biased in favour of Q1 and Q2 birthdates.

As Delorme concluded, *"There is a "self-restriction" which exists, by which children born late in the competitive year do not even start to practise this sport, when children born in the first part of the year are over-represented among beginners. The relative age effect thus has two potential influences on involvement: on the one hand, children born at the end of the competitive year are dissuaded to engage in sport, while on the other, those who do engage are more prone to drop out a few years later."*

<sup>6</sup> Delorme, Boiche & Raspaud, "Relative age and dropout in French male soccer", Journal of Sports Sciences, May 2010; 28(7): 717–722

<sup>7</sup> <https://sportspath.typepad.com/sports-path-e-learning-bl/research-on-rae-and-grassroots-football-participation-.html>

<sup>8</sup> Helsen, W. F., Starkes, J. L., & Van Winckel, J. "The influence of relative age on success and dropout in male soccer players." American Journal of Human Biology, 10, 791– 798 (1998).

<sup>9</sup> A. Mark Williams, Tom Wigmore, Matthew Syde "The Best: How Elite Athletes Are Made," John Murray Press, August 2020

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As the Matthew effect shows, small advantages accrue over time, so the gap between groups of people (e.g. those selected vs. not selected) also multiply over time. This probably provides the best explanation for how RAE distorts the talent pathway.

## 2.3 Post-Covid

Post-Covid challenges for the following groups in regular participation:

### 1. 'Re-starts'

Regularly played before Covid and are committed players.

### 2. 'Returners'

Stopped regularly playing before the pandemic.

### 3. 'Renewers'

Played previously, occasionally and informally, not as registered players.

### 4. 'Reachers'

Had never really played grassroots football.

The key implications with regard to Relative Age Effect and post-Covid grassroots football participation are likely to be as follows :

- That Q3 and Q4 birthdates have been historically underrepresented in all of the 4 target groups above.
- Those with Q3 and Q4 birthdates are shown to quit the game in greater numbers than those players with Q1 and Q2 birthdates.
- The group at most risk **not** to return to play after the pandemic and the lockdown would appear to be those with Q3 and Q4 birthdates.
- The biggest opportunity to maximise growth and retention of players in all groups is therefore to target Q3 and Q4 birthdates.

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<sup>10</sup> [https://en.wikipedia.org/wiki/Matthew\\_effect](https://en.wikipedia.org/wiki/Matthew_effect)

## 03 STRATEGIES TO ADDRESS RAE CHALLENGES

### 3.1 Research

- Check the birthdates for players in your club, team, league or association.
- Divide them into 4 quarters.
- Do you notice any changes in the registrations pre and post-Covid, especially with regard to RAE?

### 3.2 Education and Awareness

- From your research, use local examples to improve awareness of Relative Age Effect with players, parents, coaches and administrators.

### 3.3 Free Play

- If there is no selection year or selection related to competitions and children are allowed to select teams themselves then the effect of RAE will be minimal.
- This is not to suggest there is no competition, as children will always be competitive, but to avoid introducing competitive election year formats too early or without alternatives.
- Alternatives could include **free play, random selection** of teams, **one day festivals** or **AYSO balanced teams**.

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### 3.4 Selection

- If the objective of your team, club or programme is to build membership and retain players, then introducing 'try-outs', 'trials' or any other selection based on the selection year, you will open the door to RAE and potentially reduce participation.
- If you really, really must introduce selection based on a selection year, please consider the following options.

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<sup>11</sup> <https://ayso.org/about-us/about/#:~:text=Balanced%20Teams,teammates%20of%20different%20skill%20levels>

- 1** Spit the selection year into two categories, e.g. have teams and competitions for players born from January–June and a separate category for players born July–December.
  - 2** Make the season 9 months long instead of 12 months, as proposed here.<sup>12</sup>
  - 3** Use simple bio banding techniques which involves matching players of similar physical maturity whether they are late birthdates or not. But, bio banding doesn't attempt to band players on cognitive skills, just size.
  - 4** A Norwegian Initiative<sup>13</sup> where 40% of the players should be born in the second half of the selection year.
  - 5** A Dutch Initiative<sup>14</sup> to wear shirt numbers in order to identify the age of the players from old to young (e.g. number one for the oldest player and the highest number for the youngest). The numbers highlight to the selectors the age of the players.
  - 6** Williams and Wigmore in chapter three of their book also quoted research by Nick Levett, Head of Coaching at UK Coaching, which indicated in the Surrey Youth Leagues (with over 8,000 players) that “teams with an older average age were more successful. There was near perfect correlation between the ages of the teams, and which division they were in; the teams with the oldest average age were in the top division, and those with the lowest average age were in division 7, the lowest”.
- A Dutch FA (KNVB)<sup>15</sup> initiative to address this ‘average age’ issue is as follows:
- Group the Under 8’s and Under 9’s together, so two age groups.
  - As a result there are children from 24 different months.
  - The children are then divided according to their month of birth.
  - The oldest playing figure, born in January 2011, will receive 24 points.
  - The youngest footballer, who was born in December 2012, gets 1 point.
  - The intention is that each team appears at the kick-off with a maximum of 96 points.
  - The games are then 6v6 or 8v8.
- 5** Mixed age but move groups on their birthday. As used by the former Tottenham Hotspur FC Academy Manager, John Mcdermott,<sup>16</sup> “putting the seven, eight, nine-and 10-year-olds together, therefore a player moves up to the older group on his birthday. In that way he experiences being the youngest and eldest as the year progresses.”

<sup>12</sup> Boucher, J. ; Halliwell, W. CAHPER Journal 1991 Vol.57 No.1 pp.16-20 ref.7

<sup>13</sup> <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6026793/>

<sup>14</sup> <https://pubmed.ncbi.nlm.nih.gov/27238077/>

<sup>15</sup> <https://www.hetamsterdamschevoetbal.nl/knvb-zoekt-oplossing-voor-geboortemaandeffect-niet-logisch-wat-we-doen/>

<sup>16</sup> <https://www.theguardian.com/football/2011/jun/19/fa-plans-age-group-football>

We would be very interested in any other strategies you have used to manage RAE and maximise participation across all birthdates. Also, if you have any research and analysis on pre and post-Covid participation rates relating to RAE we would be delighted if you could share it with us and we can help promote this.

If you would like to learn more about how to maximise participation and also identify potential talented players please go to [www.sportspath.com](http://www.sportspath.com) > Online Courses.

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P.S. Don't forget to check out Laura Finnegan's blog:  
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