



Commentary: “How Much is that Player in the Window? The One with the Early Birthday?” Relative Age Influences the Value of the Best Soccer Players, but Not the Best Businesspeople

Florian Loffing*

Institute of Sports and Sports Science, University of Kassel, Kassel, Germany

Keywords: relative age effects, birth date, statistics, outliers, bias

A commentary on

“How Much is that Player in the Window? The One with the Early Birthday?” Relative Age Influences the Value of the Best Soccer Players, but Not the Best Businesspeople

by Furley, P., Memmert, D., and Weigelt, M. (2016). *Front. Psychol.* 7:84. doi: 10.3389/fpsyg.2016.00084

OPEN ACCESS

Edited by:

Karen Zentgraf,
University of Münster, Germany

Reviewed by:

Jörn Munzert,
Justus Liebig University Giessen,
Germany
Holger Heppe,
University of Münster, Germany

*Correspondence:

Florian Loffing
f.loffing@uni-kassel.de

Specialty section:

This article was submitted to
Movement Science and Sport
Psychology,
a section of the journal
Frontiers in Psychology

Received: 21 March 2016

Accepted: 13 April 2016

Published: 28 April 2016

Citation:

Loffing F (2016) Commentary: “How Much is that Player in the Window? The One with the Early Birthday?” Relative Age Influences the Value of the Best Soccer Players, but Not the Best Businesspeople. *Front. Psychol.* 7:620. doi: 10.3389/fpsyg.2016.00620

Furley et al. (2016) recently reported that among the 100 most valuable soccer players, but not the 100 richest billionaires, individuals born in the first compared to the second half of the year were overrepresented (60 vs. 40%) and had higher estimated monetary value (EMV).

The idea of testing whether birthdate-related selection cut-off dates are associated with players’ EMV is attractive. Implications for people advocating equal chances of high sporting achievement might be suggested, provided that evidence is substantive. Here I show that the data do not support the authors’ interpretation that “relative age influences the value of the best soccer players.”

Instead of categorizing players into birth halves and thereby losing potentially meaningful information (examples of own work that can be legitimately criticized in this respect: Loffing et al., 2010; Schorer et al., 2015), correlational analysis could have been used to test for an association between month of birth and EMV. Neither, parametric ($r = -0.067$, $p = 0.509$) nor non-parametric tests (e.g., $\tau_b = -0.004$, $p = 0.955$) indicate that EMV decreases as players are born later in the year (**Figure 1A**)¹.

The authors’ conclusion “that birthdates (...) can actually result in higher monetary value” (p. 2) is based on a biased t -statistic². Eighty-two players have an EMV below 50 million €, whereas three players have an EMV above 100 million € (see **Figure 1B**). Lionel Messi (born on 24 June 1987) is the most valuable player (268.05 million €). Thus, among the most valuable players very few have very outstanding EMV. These “outliers” bias the t -statistic; e.g., there is a clear Lionel Messi effect. To illustrate, exclusion of Messi only, $t_{(97)} = 0.696$, $p = 0.488$, $d = 0.14$ (−0.26, 0.54), or assuming him to be born just 1 week later on 1 July 1987 (i.e., second half of the year), $t_{(98)} = -0.432$, $p = 0.666$, $d = -0.09$ (−0.48, 0.31), nullifies the authors’ conclusion (e.g., see the range in 95% CIs for effect sizes calculated with Exploratory Software for Confidence Intervals; Cumming, 2012).

¹EMV is reported in Euro, not in Dollars as done by the authors, because the dataset provided online lists players’ values in Euro. Use of either currency, however, does not alter the outcome of inferential statistics.

²There were also some errors in original data coding. James Rodriguez (12 July 1997, 65.65 million €) was categorized as being born in the first half of the year and EMV of Manuel Neuer (36 million €, 27 March 1987) and Mesut Özil (35.85 million €, 15 October 1988) were interchanged. Here, corrected values are used.

REFERENCES

- Ashworth, J., and Heyndels, B. (2007). Selection bias and peer effects in team sports - the effect of age grouping on earnings of German soccer players. *J. Sports Econom.* 8, 355–377. doi: 10.1177/1527002506287695
- Cobley, S. P., Schorer, J., and Baker, J. (2008). Relative age effects in professional German soccer: a historical analysis. *J. Sports Sci.* 26, 1531–1538. doi: 10.1080/02640410802298250
- Cumming, G. (2012). *Understanding the New Statistics: Effect Sizes, Confidence Intervals, and Meta-Analysis*. New York, NY: Routledge.
- Delorme, N., and Champely, S. (2015). Relative Age Effect and chi-squared statistics. *Int. Rev. Sociol. Sport* 50, 740–746. doi: 10.1177/1012690213493104
- Drummond, G. B., and Vowler, S. L. (2011). Show the data, don't conceal them. *Exp. Physiol.* 96, 483–485. doi: 10.1113/expphysiol.2011.057323
- Furley, P., Memmert, D., and Weigelt, M. (2016). "How much is that player in the window? The one with the early birthday?" Relative age influences the value of the best soccer players, but not the best businesspeople. *Front. Psychol.* 7:84. doi: 10.3389/fpsyg.2016.00084
- Gibbs, B. G., Jarvis, J. A., and Dufur, M. J. (2012). The rise of the underdog? The relative age effect reversal among Canadian-born NHL hockey players: a reply to Nolan and Howell. *Int. Rev. Sociol. Sport* 47, 644–649. doi: 10.1177/1012690211414343
- Gibbs, B. G., Shafer, K., and Dufur, M. J. (2015). Why infer? The use and misuse of population data in sport research. *Int. Rev. Sociol. Sport* 50, 115–121. doi: 10.1177/1012690212469019
- Helsen, W. F., Baker, J., Michiels, S., Schorer, J., Van winckel, J., and Williams, A. M. (2012). The relative age effect in European professional soccer: did ten years of research make any difference? *J. Sports Sci.* 30, 1665–1671. doi: 10.1080/02640414.2012.721929
- Loffing, F., Schorer, J., and Cobley, S. P. (2010). Relative Age Effects are a developmental problem in tennis: but not necessarily when you're left-handed! *High Abil. Stud.* 21, 19–25. doi: 10.1080/13598139.2010.488084
- Musch, J., and Hay, R. (1999). The relative age effect in soccer: cross-cultural evidence for a systematic discrimination against children born late in the competition year. *Sociol. Sport J.* 16, 54–64.
- Open Science Collaboration (2015). Estimating the reproducibility of psychological science. *Science* 349:aac4716. doi: 10.1126/science.aac4716
- Schorer, J., Cobley, S., Bräutigam, H., Loffing, F., Hütter, S., Büsch, D., et al. (2015). Developmental contexts, depth of competition and relative age effects in sport: a database analysis and a quasi-experiment. *Psychol. Test Assess. Model.* 57, 123–143.
- Schorer, J., Cobley, S., Büsch, D., Bräutigam, H., and Baker, J. (2009). Influences of competition level, gender, player nationality, career stage and playing position on relative age effects. *Scand. J. Med. Sci. Sports* 19, 720–730. doi: 10.1111/j.1600-0838.2008.00838.x

Conflict of Interest Statement: The author declares that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

The reviewer, HH, and handling Editor declared their shared affiliation, and the handling Editor states that the process nevertheless met the standards of a fair and objective review.

Copyright © 2016 Loffing. This is an open-access article distributed under the terms of the Creative Commons Attribution License (CC BY). The use, distribution or reproduction in other forums is permitted, provided the original author(s) or licensor are credited and that the original publication in this journal is cited, in accordance with accepted academic practice. No use, distribution or reproduction is permitted which does not comply with these terms.