

Relative Age Effect in Elite Youth Soccer

“initial advantage tends to beget further advantage”

(Rigney, 2010)

Dr. Ajit Korgaokar



Relative Age Effect (RAE) in Elite Youth Soccer

Today's Discussion:

- RAE Defined
- RAE in soccer
- RAE Phenomenon
- RAE in U.S.
- RAE among females
- RAE in ECNL
- Where are we now?
- Solutions
- Questions/comments



Relative Age Effect in Elite Youth Soccer

Relative Age

- The difference in chronological age among children born in the same selection year/cohort
(e.g. January 1st – December 31st or August 1st – July 31st)

Relative Age Effect (RAE)

- Performance and participation advantages (older)
- Overrepresentation of older athletes
- Underrepresentation of younger athletes

RAEs: Soccer, ice hockey, basketball, tennis (right handed)



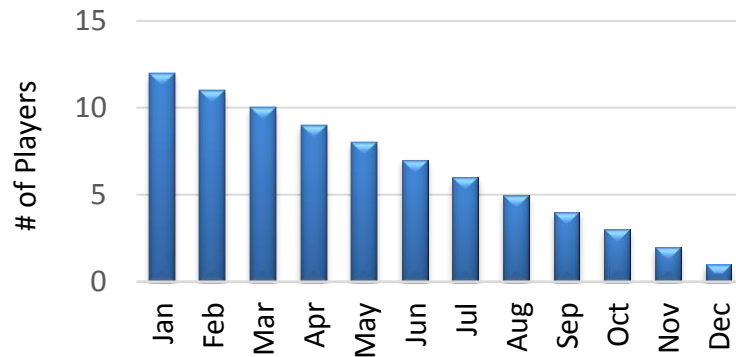
Relative Age Effect in Soccer

Relative Age Effect (RAE) in Soccer

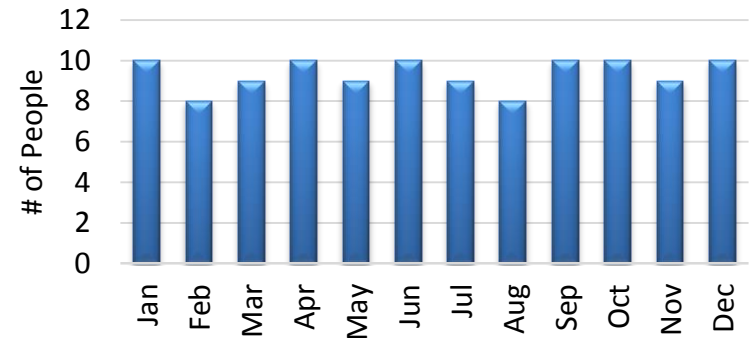
- RAEs investigated since the 1990s
- RAEs discovered in European and non-European countries
- Systematic bias toward the youngest players (males)
- Preference for the oldest players (males)
- Unclear among female players

Relative Age Effect in Elite Youth Soccer

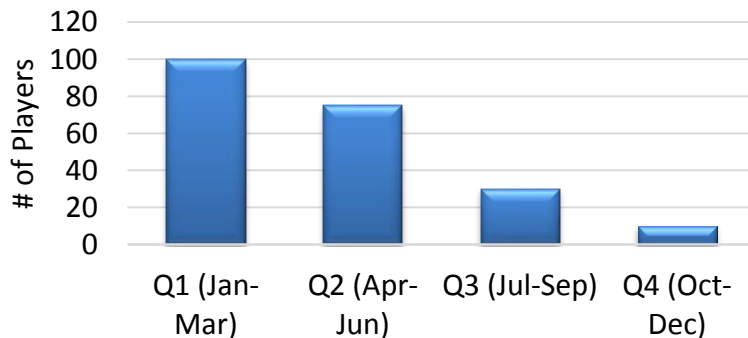
Soccer Players



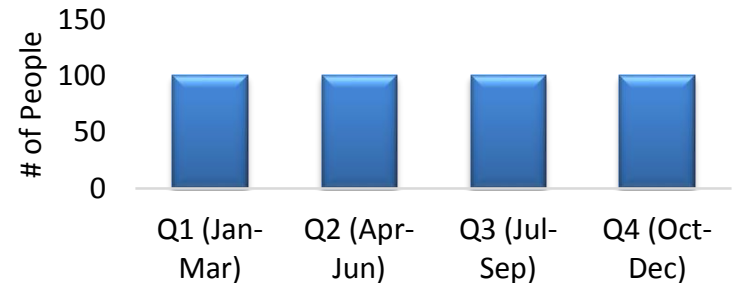
General Population



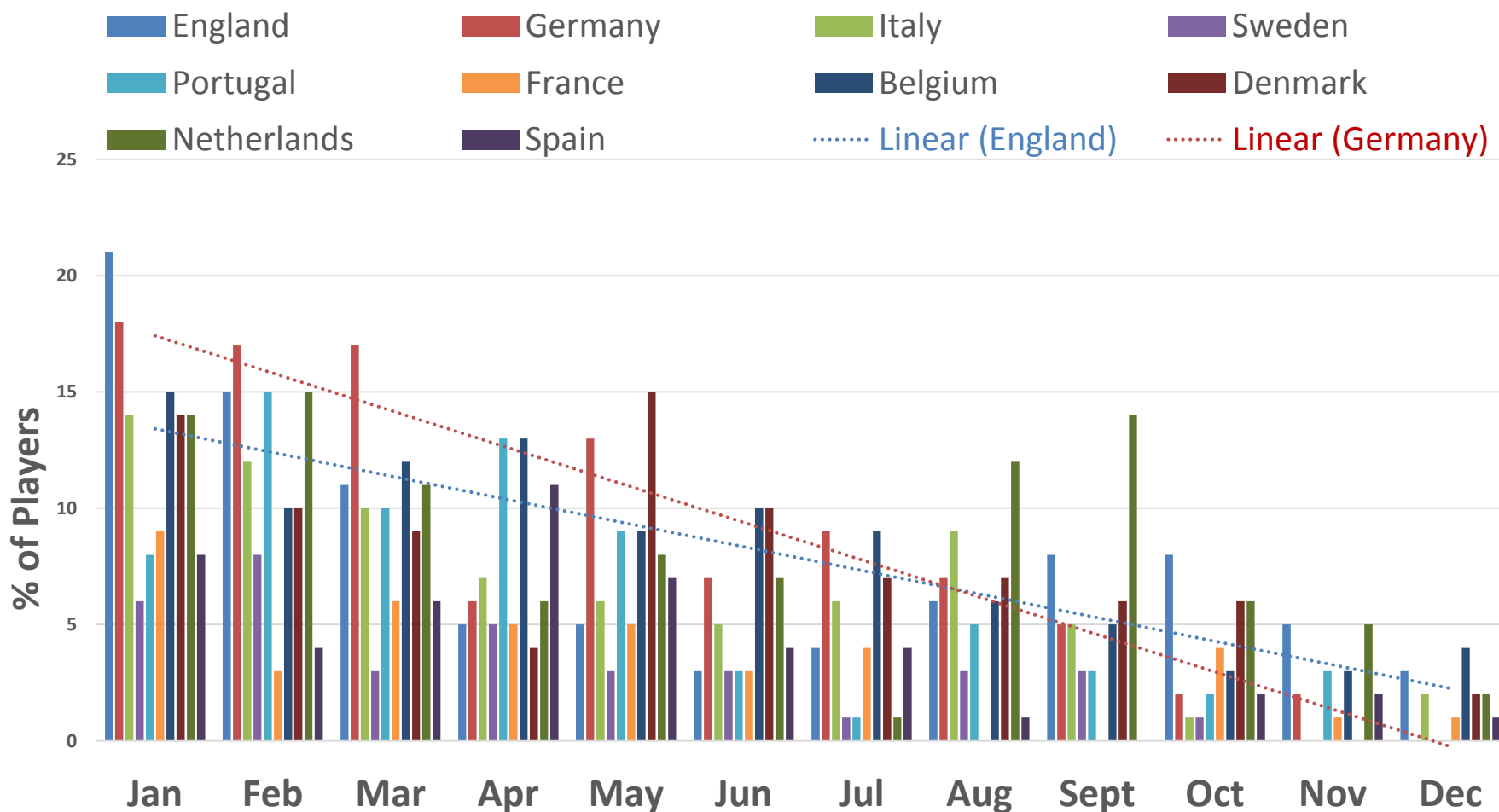
Soccer Players (Quartiles)



General Population (Quartiles)



Birthdate Distribution for U15, U16, U17 & U18 National Team Players

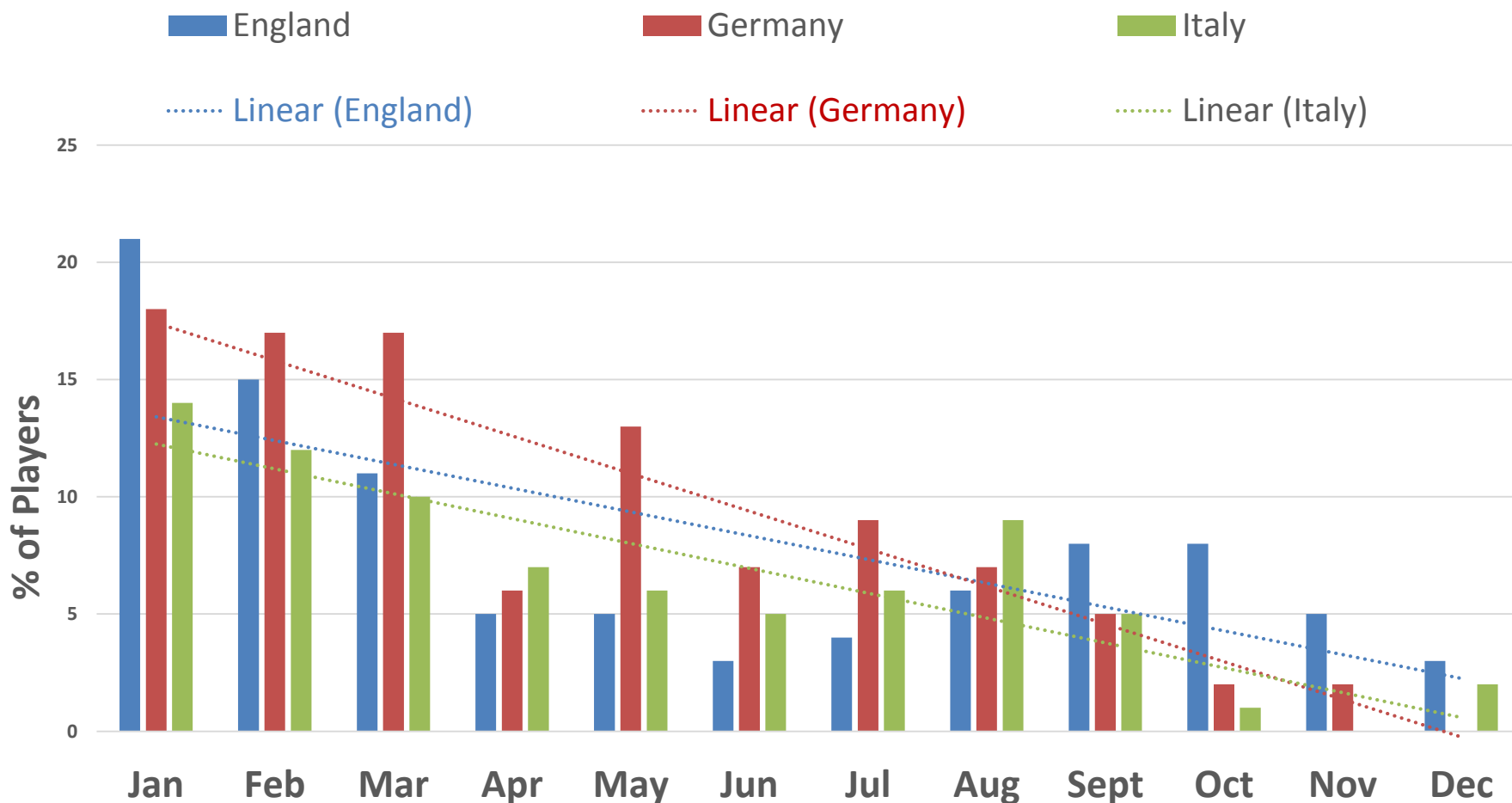


Adopted from: Helsen, W. F., Van Winckel, J., & Williams, A. M. (2005). The relative age effect in youth soccer across Europe. *Journal of Sports Sciences*, 23(6), 629-636.

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Birthdate Distribution for U15, U16, U17 & U18 National Team Players



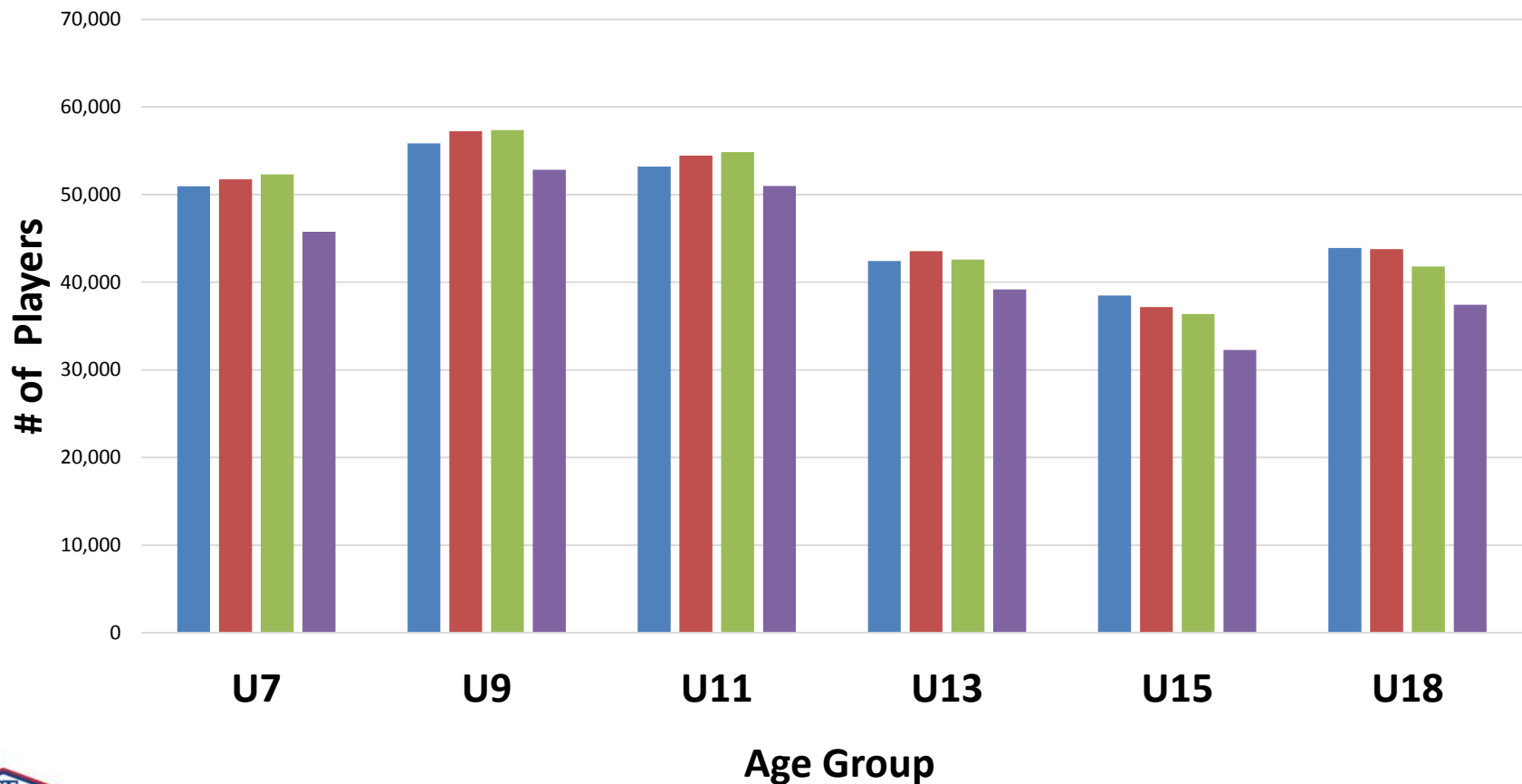
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French Soccer Federation 2006-2007 Season

Q1 (Jan-Mar) Q2 (Apr-Jun) Q3 (Jul-Sep) Q4 (Oct-Dec)

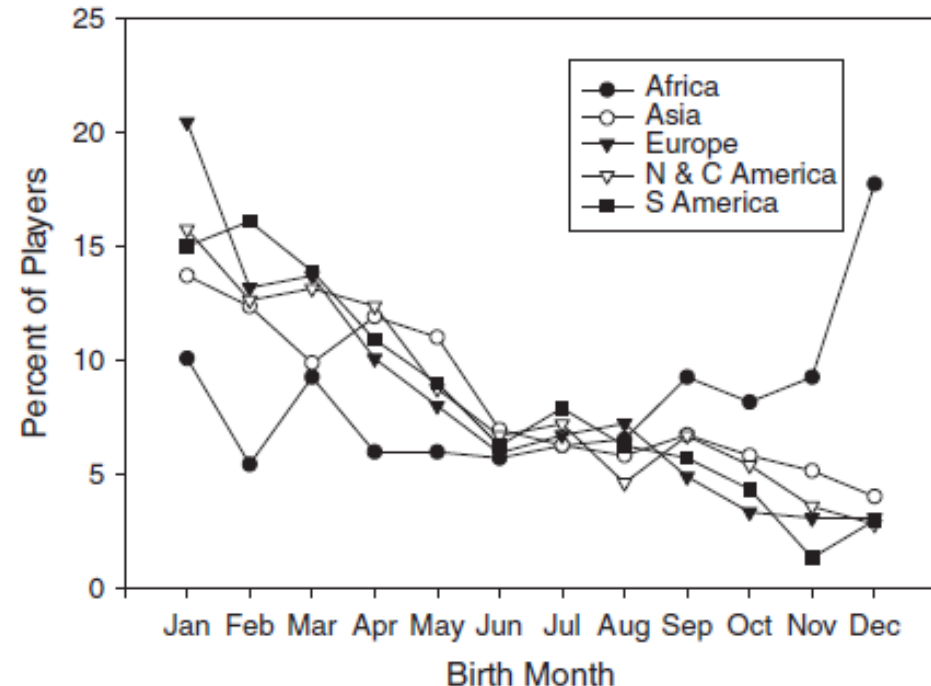
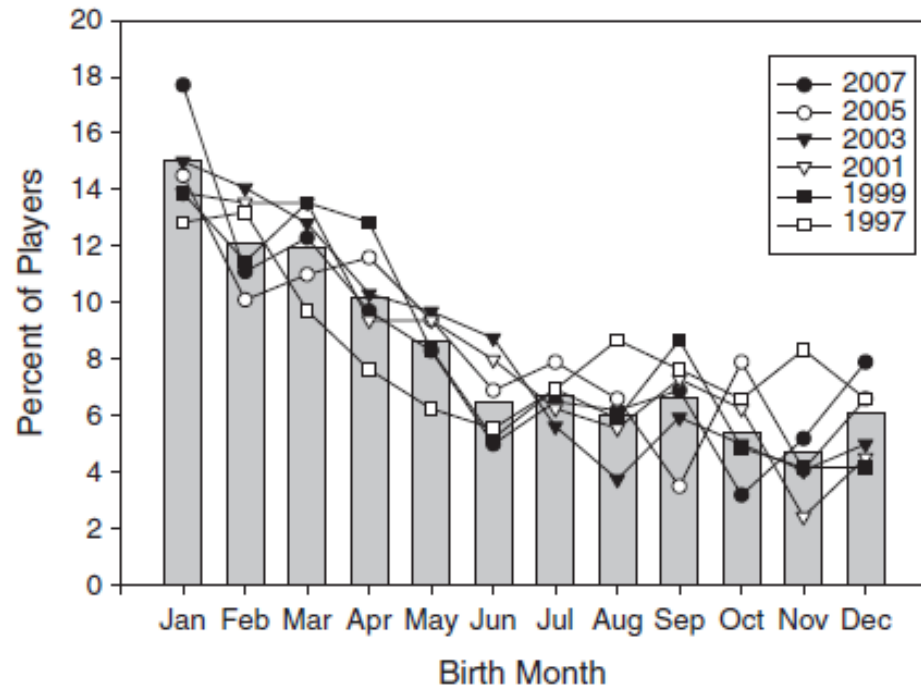


Adopted from: Delorme, N., Boiché, J., & Raspaud, M. (2010). Relative age effect in elite sports: Methodological bias or real discrimination? *European Journal of Sport Science*, 10(2), 91-96.



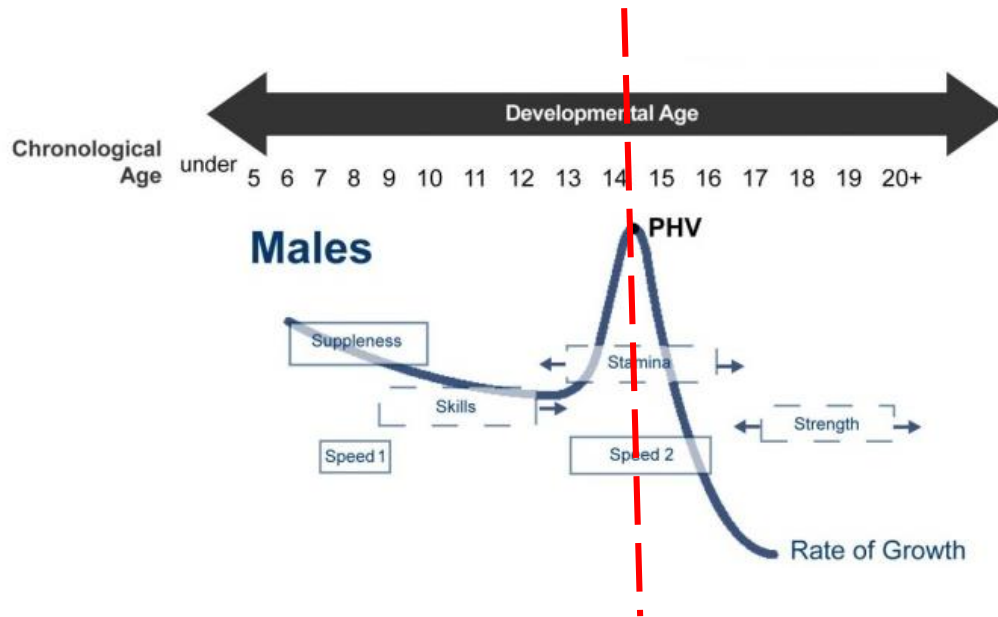
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FIFA U17 World Cup Competition 1997-2007



Adopted from: Williams, J. H. (2010). Relative age effect in youth soccer: Analysis of the FIFA U17 World Cup competition. *Scandinavian Journal of Medicine & Science in Sports*, 20(3), 502-508.

Components of the RAE Phenomenon Among Boys



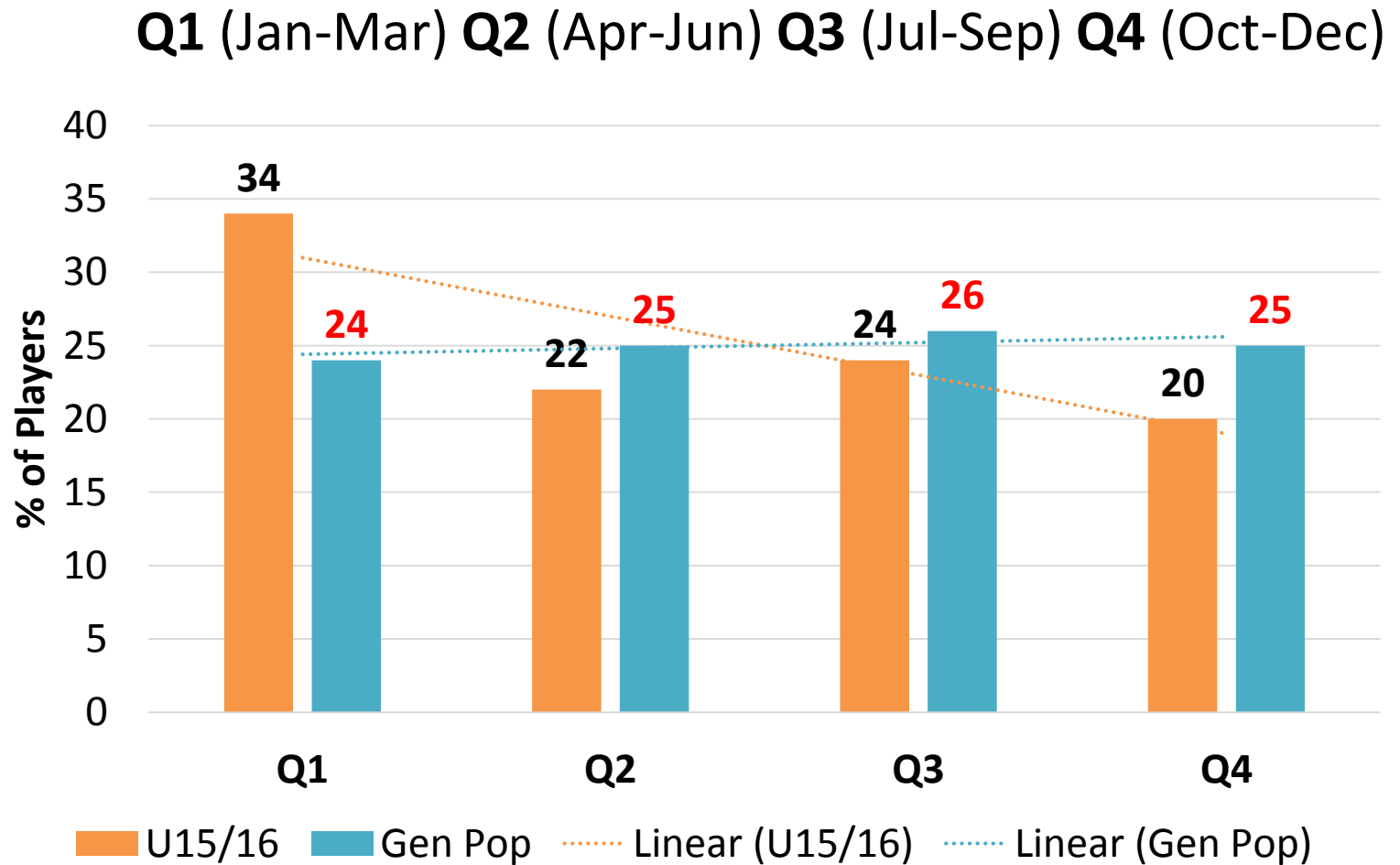
- Growth & maturation
- Early competition in soccer
- Early identification/selection
- Physical attributes
- Developmental Pathway
- Attention
- Motivation
- Success/winning/development

RAE Among Players in the U.S.

- **Tennessee Youth Soccer Players** (Musch, 2002)
 - No RAEs 7-12 yrs. (males & females)
 - RAEs 13-18 yrs. (males & females)
- **Olympic Development Program Region Teams** (ODP) (males) (Glamser & Vincent, 2004)
 - 69% born January-June
- **ODP & U.S. National teams** (Vincent & Glamser, 2006)
 - No RAE among female ODP (state & reg) or U.S. u19s
 - RAEs among male regional ODP and U.S. u17s



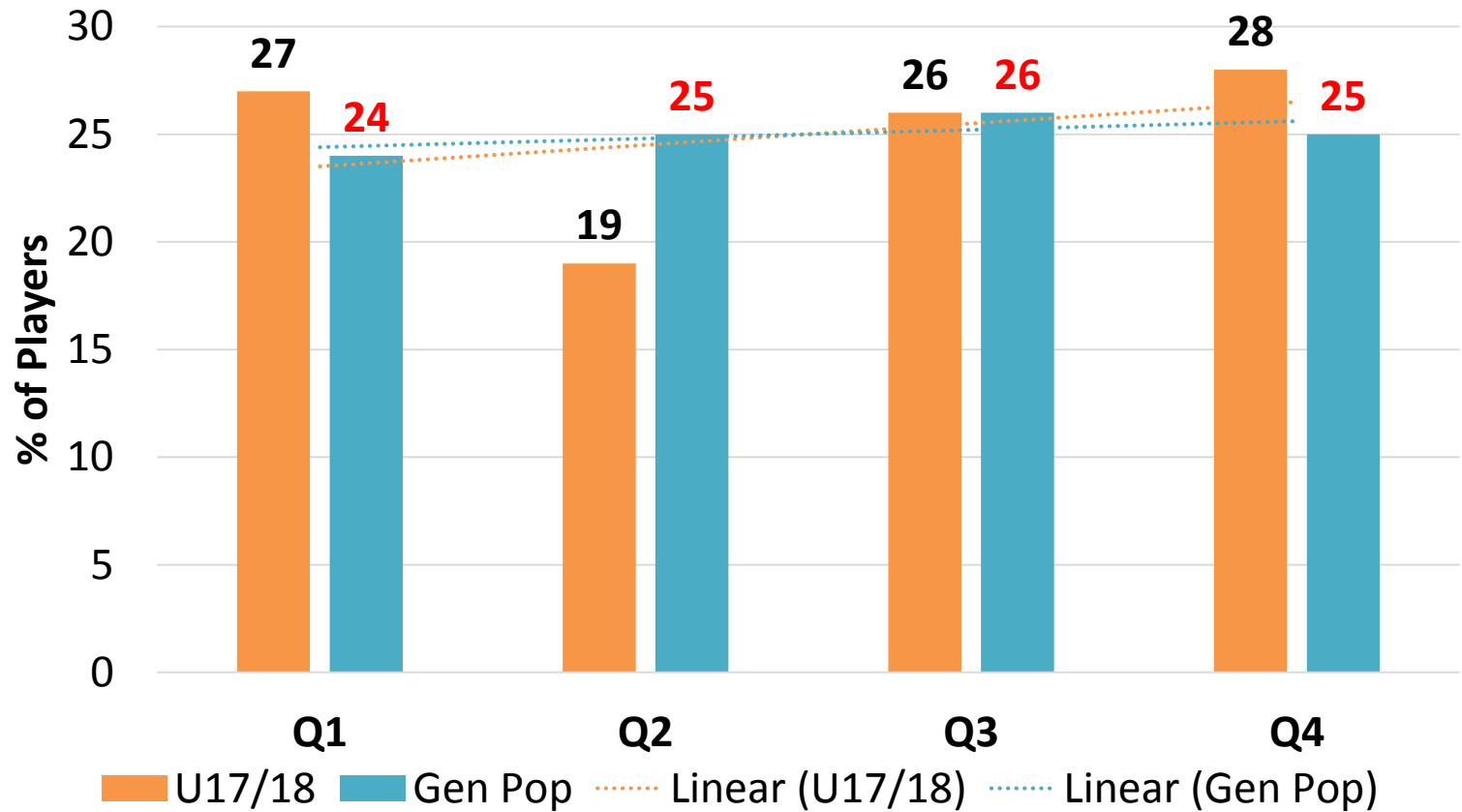
2012-2013 USSDA U15/16 Age Group



Korgaokar et. al. (2013)

2012-2013 USSDA U17/18 Age Group

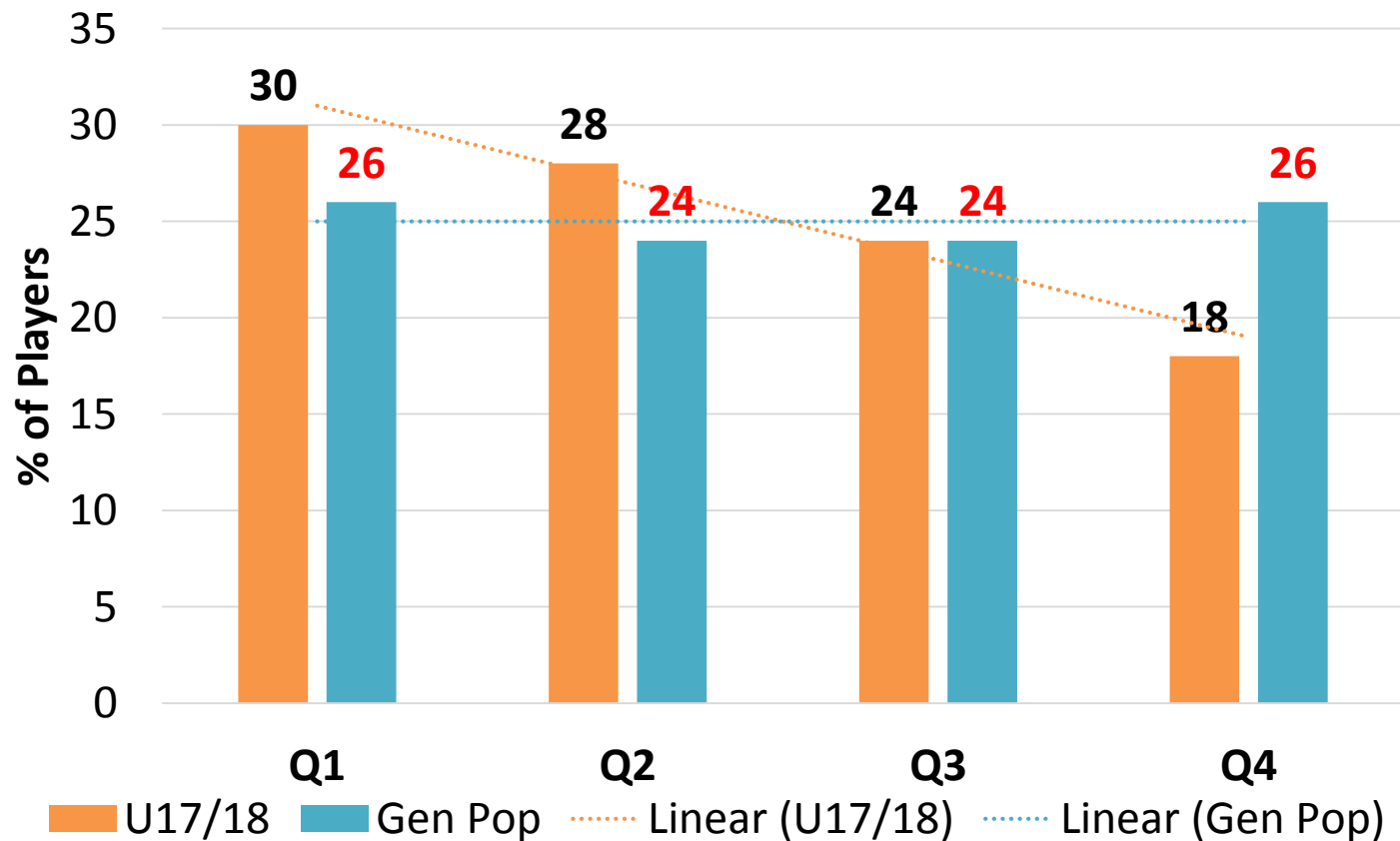
Q1 (Jan-Mar) **Q2** (Apr-Jun) **Q3** (Jul-Sep) **Q4** (Oct-Dec)



Korgaokar et. al. (2013)

2012-2013 USSDA U17/18 Age Group

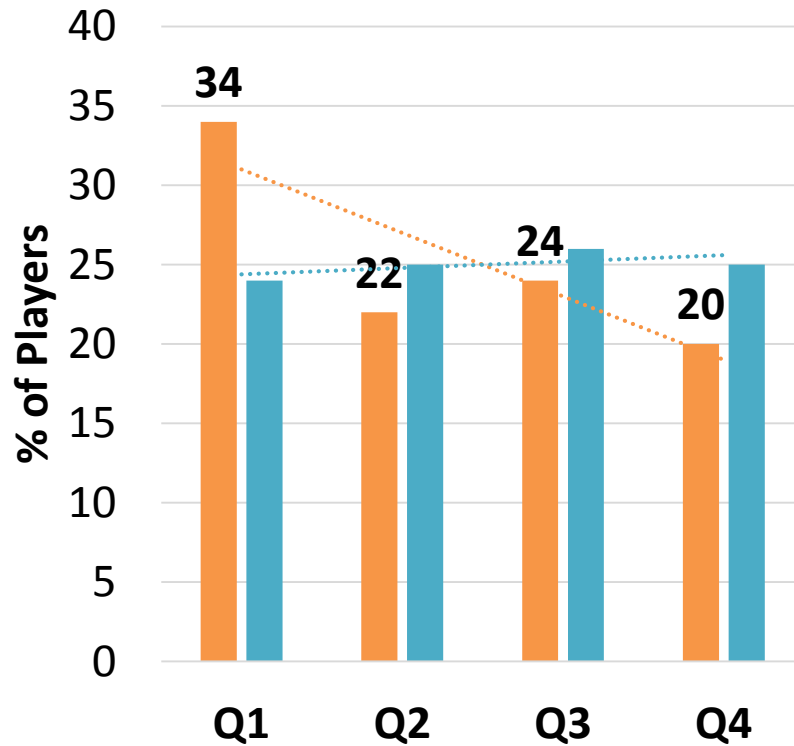
Q1 (Aug-Oct) **Q2** (Nov-Jan) **Q3** (Feb-Apr) **Q4** (May-Jul)



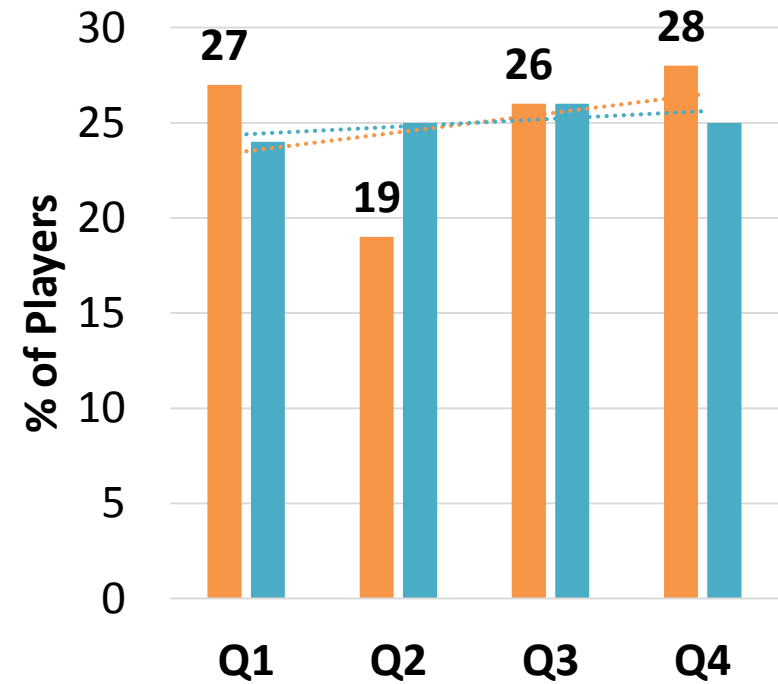
Korgaokar et. al. (2013)

2012-2013 USSDA U15/16 & U17/18 Age Groups

U15/16 Boys



U17/18 Boys



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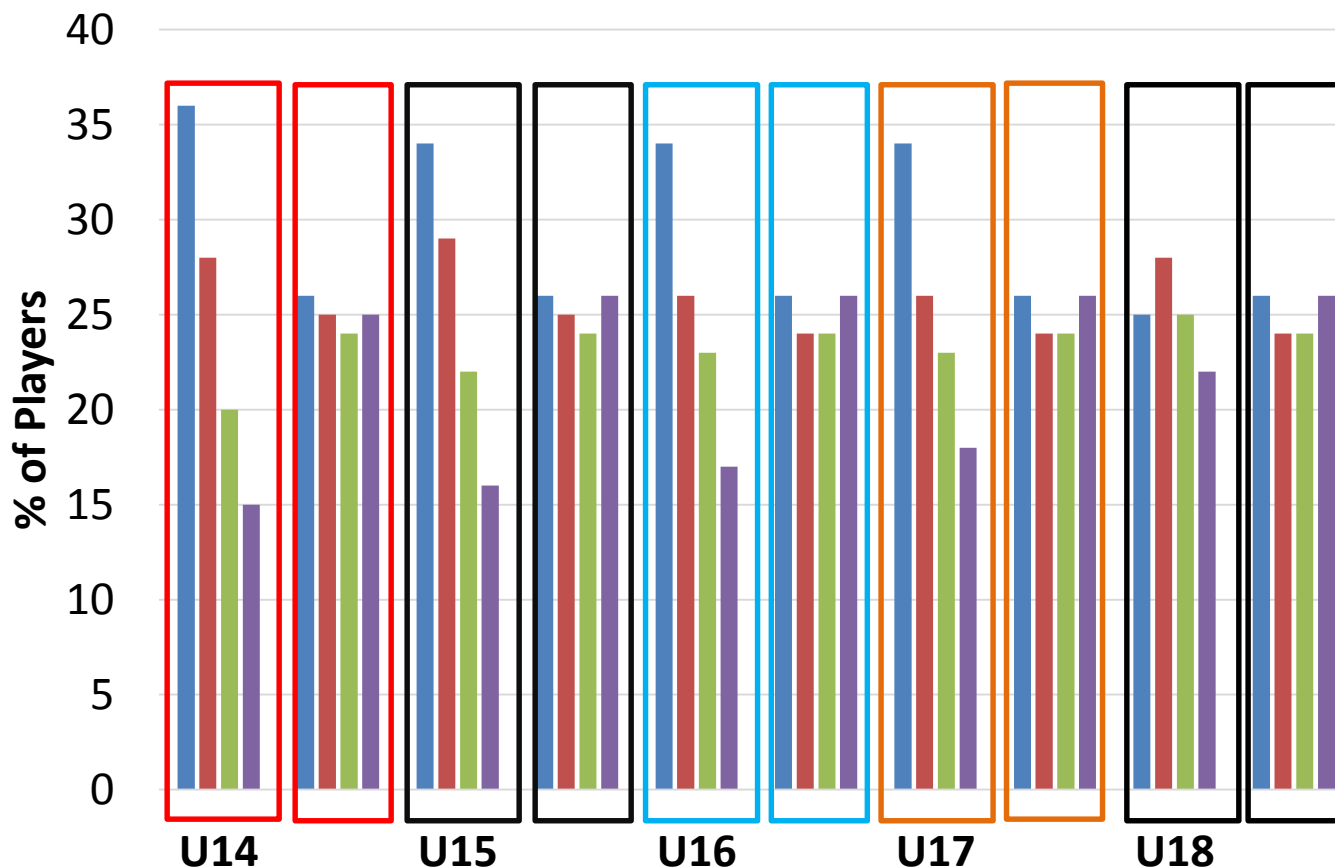
RAE Among Female Soccer Players

- RAE research has been equivocal among females
 - French senior professional players (no RAE)
 - French youth & senior non-professionals (RAE)
 - U.S. ODP (state & reg) or U.S. u19s (no RAE)
 - Swiss soccer players
 - Talented -**RAE** for 10-14 yrs., **no** RAE for 15-20 yrs.
 - National teams - **No** RAE for u17 & u19



2012-2013 ECNL U14-U18 Age Groups

Q1 (Aug-Oct) **Q2** (Nov-Jan) **Q3** (Feb-Apr) **Q4** (May-Jul)

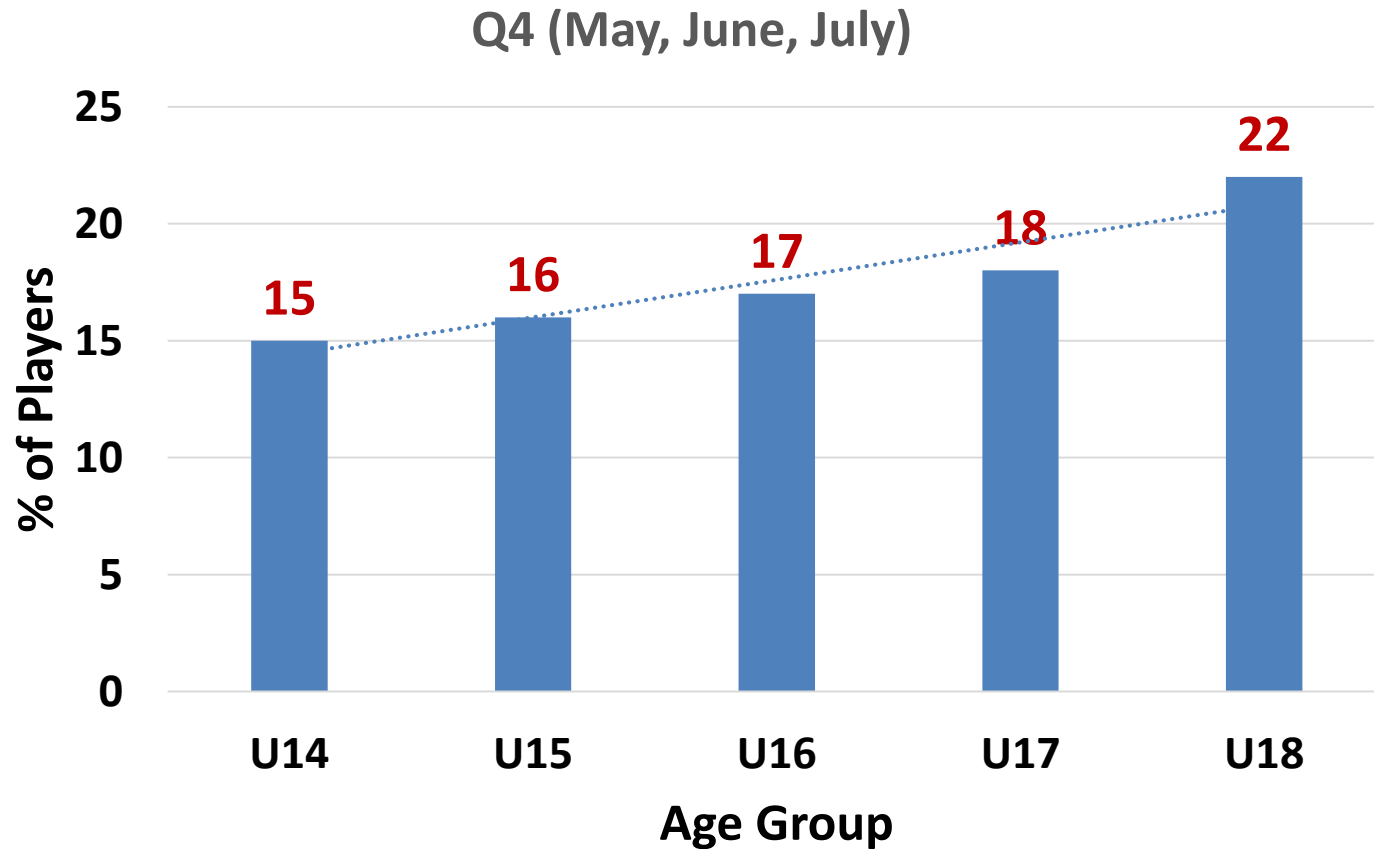


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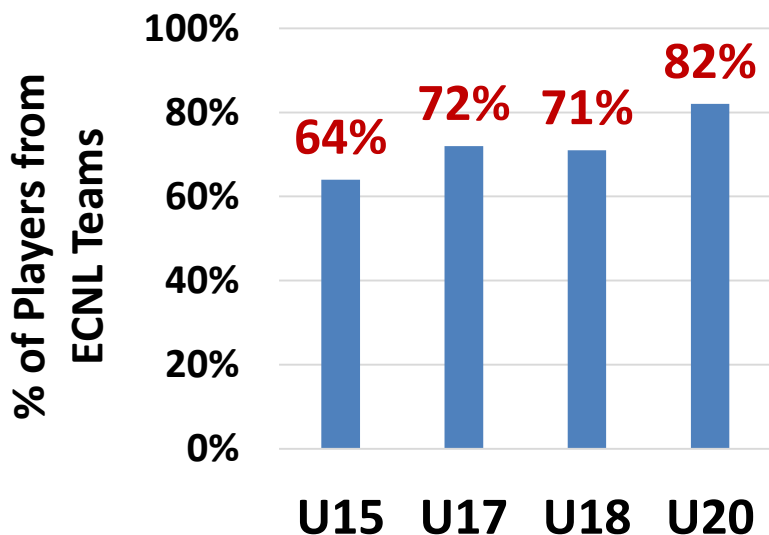


2012-2013 ECNL U14-U18 Age Groups Q4

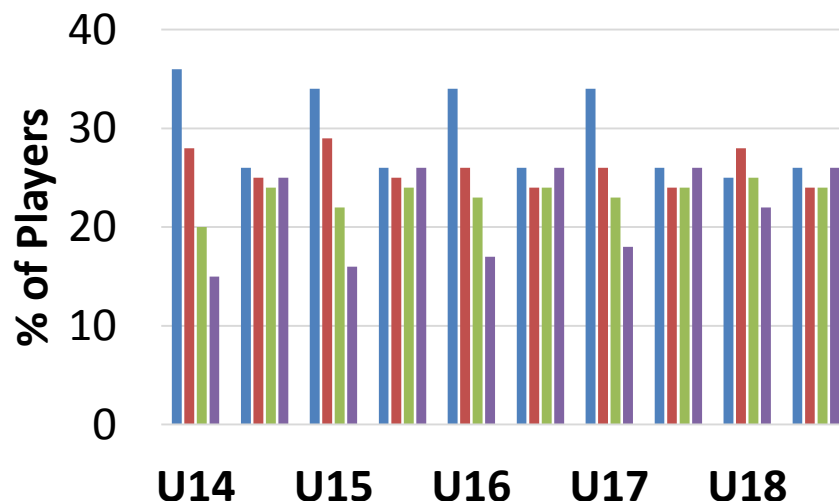


ECNL Players in the U.S. Women's National Teams

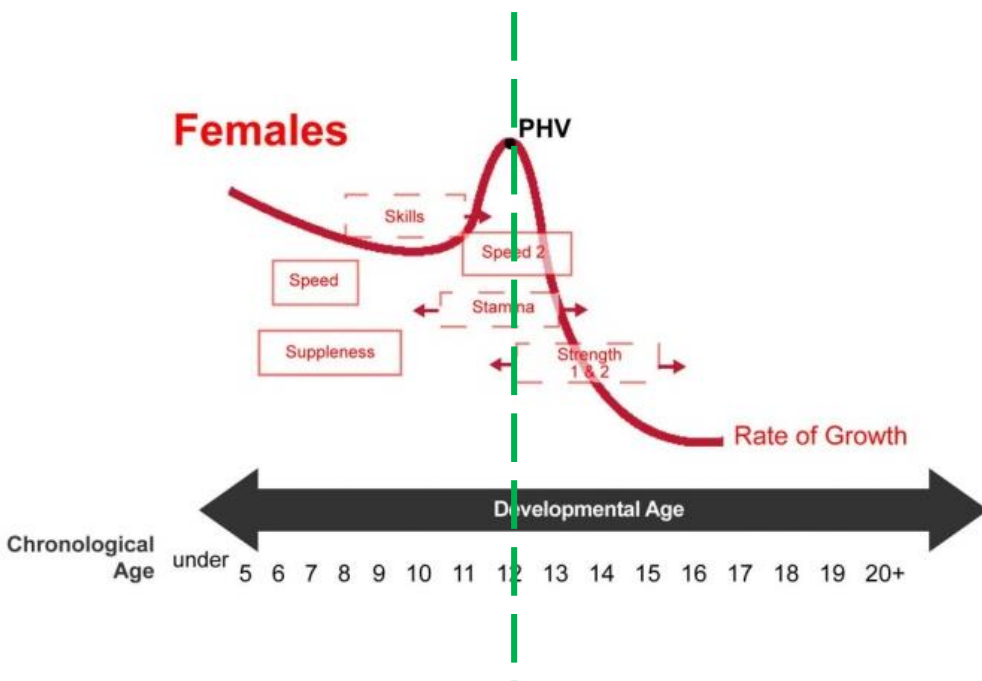
U.S. Women's National Teams 2013



ECNL 2012-2013 Season



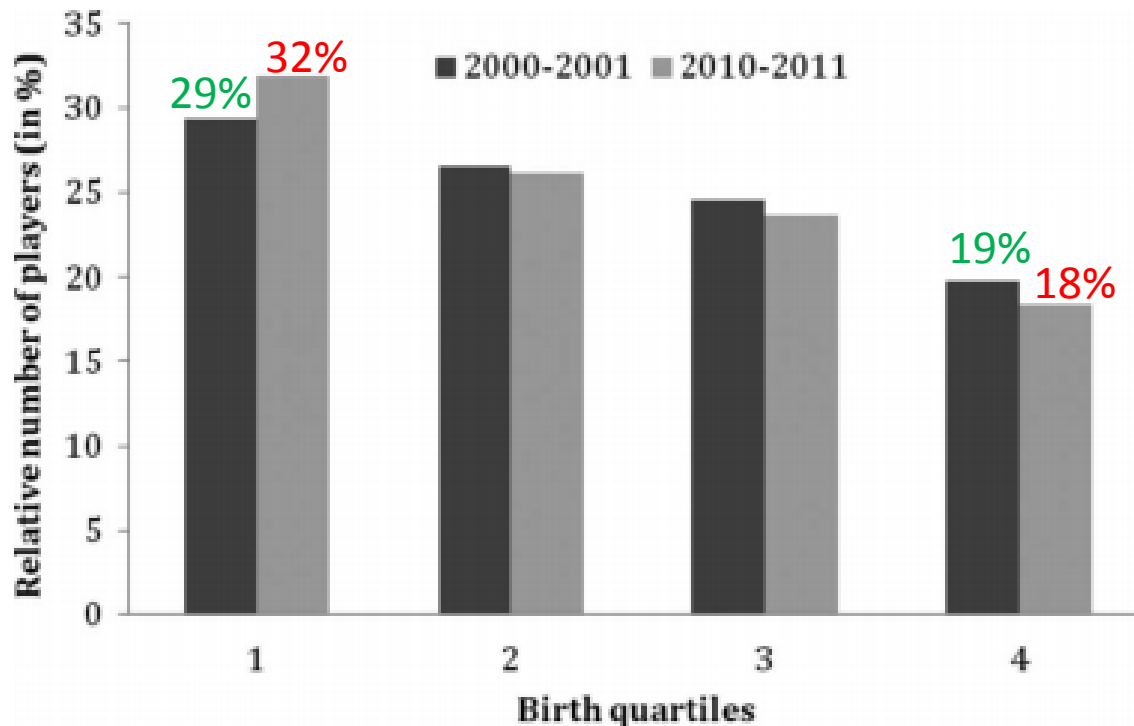
Reasons for RAE in Females



- Competition (USYSA 3,000,000)
- Maturation (PHV)
- Developmental pathway advantage
- Barrier for the youngest in the cohort

Adopted from: Balyi, I., & Way, R. (2005). The role of monitoring growth in long-term athlete development. *Canadian Sport for Life*.

Where are we now?



- DOBs of Professional soccer players
- 10 European countries
- 10 yr. period
- No change in RAE in 10 yrs.

Solutions

- Rotate cut-off date
- Create more age categories with a smaller bandwidth (e.g. 6 months instead of 12 months)
- Change the mentality of youth team coaches (less reliance on physical characteristics)
- Balance between short-term success and long-term development



Questions?

Questions?
Thoughts?
Comments?

Thank You!

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