

# Sporting milestones and career progression of male Australian junior international level team sport athletes

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**Melissa Hopwood<sup>1,2</sup>**

Damian Farrow<sup>1,3</sup>, Clare MacMahon<sup>1</sup>, & Joseph Baker<sup>2</sup>

<sup>1</sup> Victoria University, Melbourne, Australia

<sup>2</sup> York University, Toronto, Canada

<sup>3</sup> Australian Institute of Sport, Canberra, Australia



AUSTRALIAN  
INSTITUTE OF SPORT



# Introduction

- Athlete developmental histories are frequently collected to identify the factors associated with sport expertise  
*(E.g. Bloom, 1985; Baker et al. 2003; Côté, 1999; Gulbin et al. 2010; Helsen et al. 1998; Memmert et al. 2010, Moesch et al. 2011; Ward et al., 2007)*
- Identification of the ages at which highly skilled athletes reach important sporting milestones:
  - contributes to our understanding of the ‘pathway to expertise’
  - assists in the creation of developmentally appropriate youth sport programs
  - provides a marker to assess athlete development

# Aims

- To explore the ages at which athletes reach important milestones in their sporting careers
- To explore the time course of career progression from sport initiation to participation in junior international level competition

# Methods

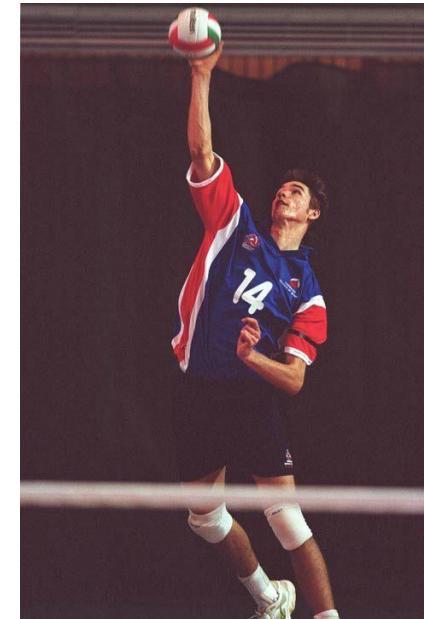
- Participants
  - Male, Australian, current junior national team members



$n = 24$   
Age =  $16.8 \pm 0.9$



$n = 13$   
Age =  $17.7 \pm 1.4$



$n = 6$   
Age =  $18.1 \pm 1.8$

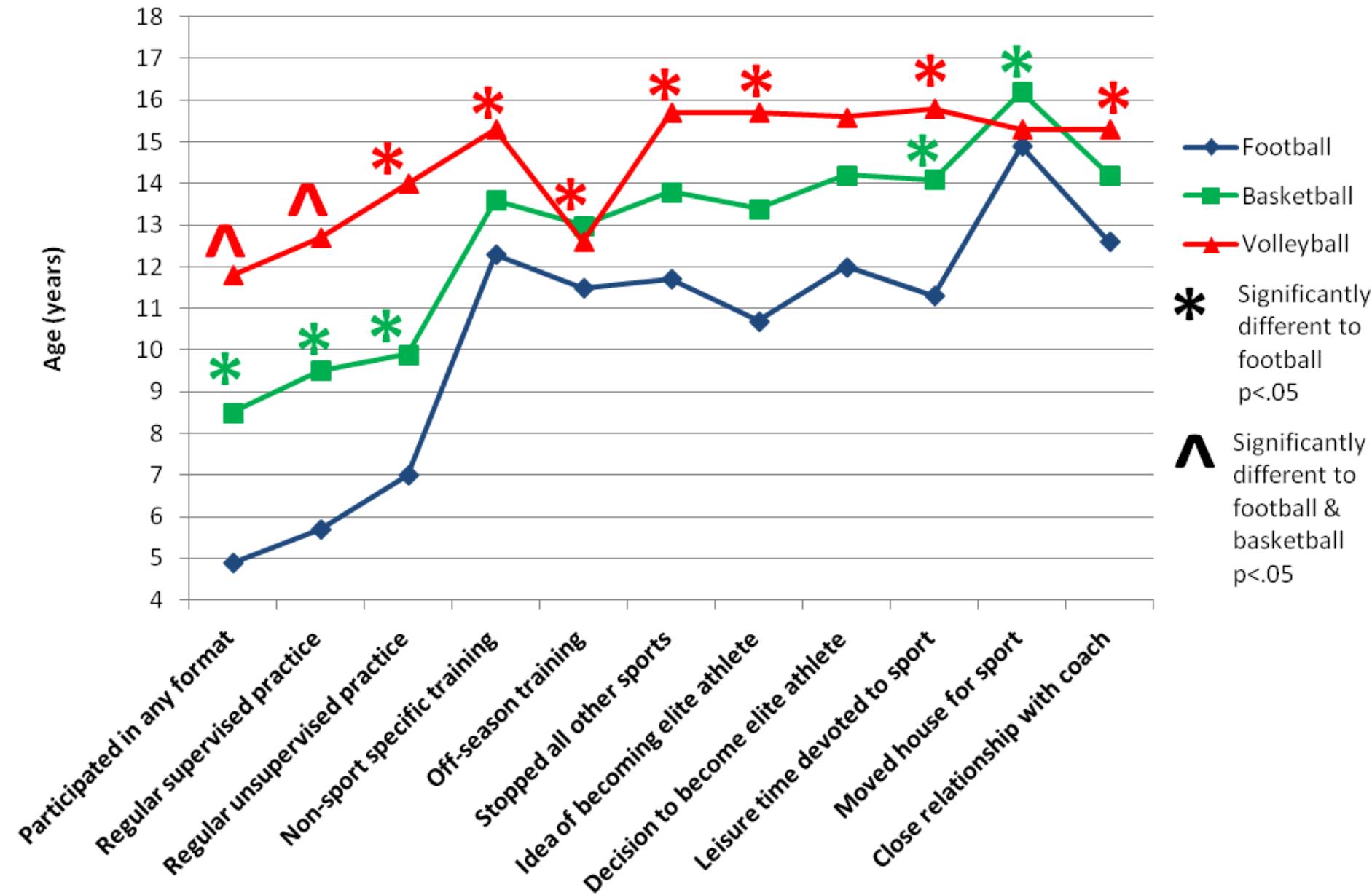
# Methods

- Data collection
  - Developmental History of Athletes Questionnaire  
*(Hopwood et al. 2010, Hopwood et al. 2011)*
- Statistical analysis
  - Separate one-way ANOVAs for sport-based differences in:
    - Age at attainment of career milestones
    - Number of years from sport initiation to each milestone
  - Post-hoc tests for significant findings
    - $p < .05$

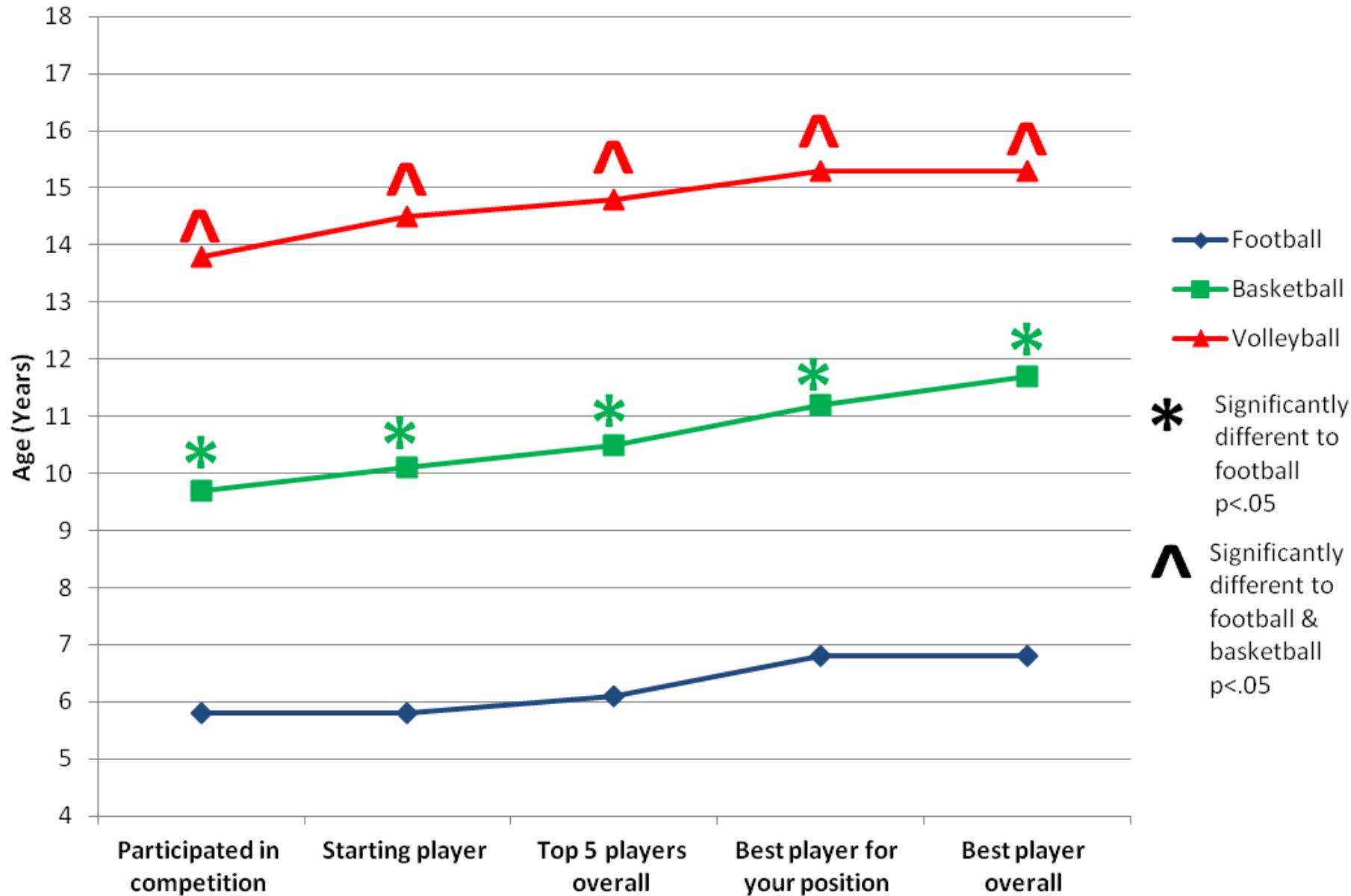
# Results

- Age at attainment of important sporting milestones

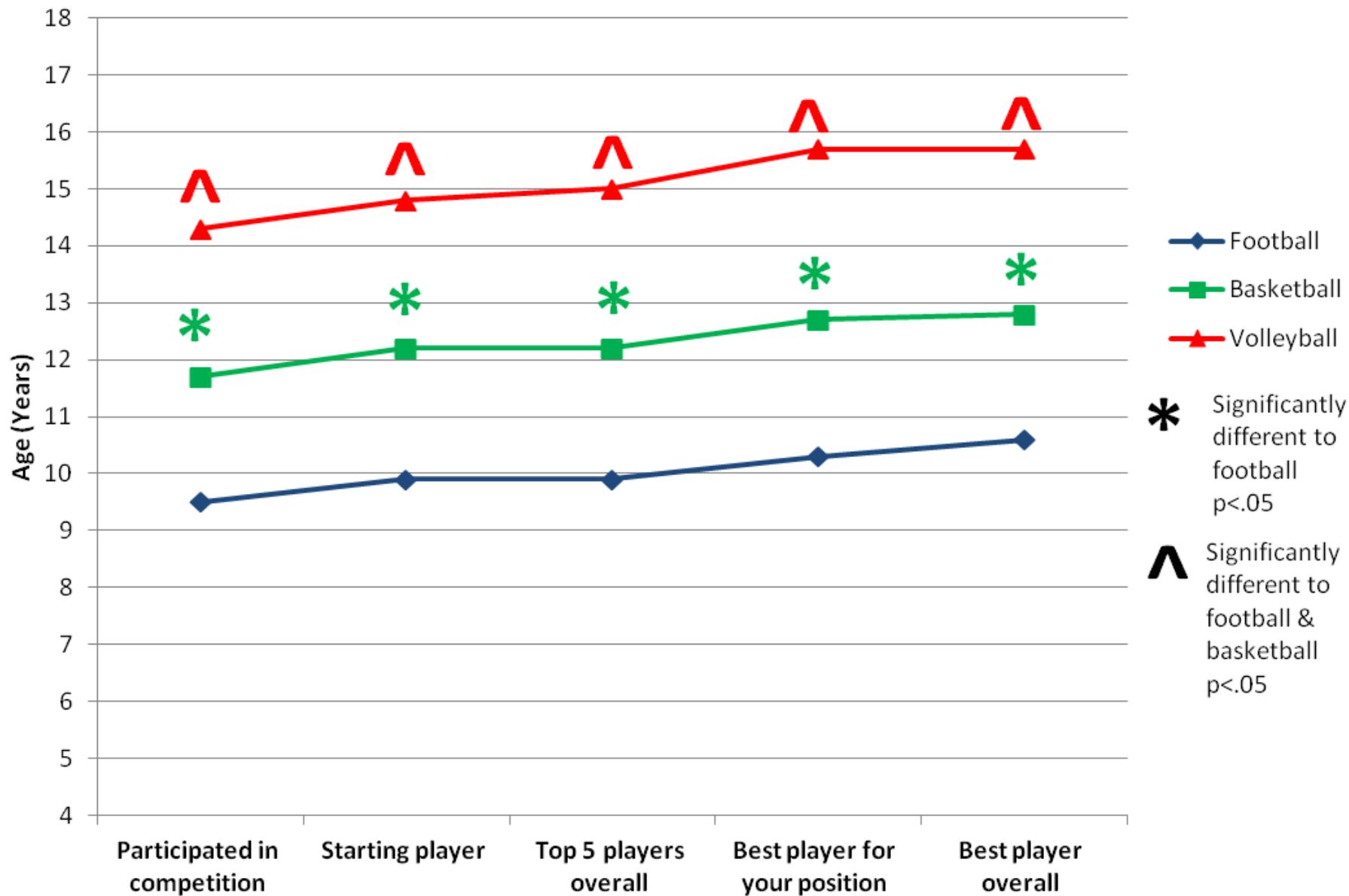
# General milestones – Age when you first:



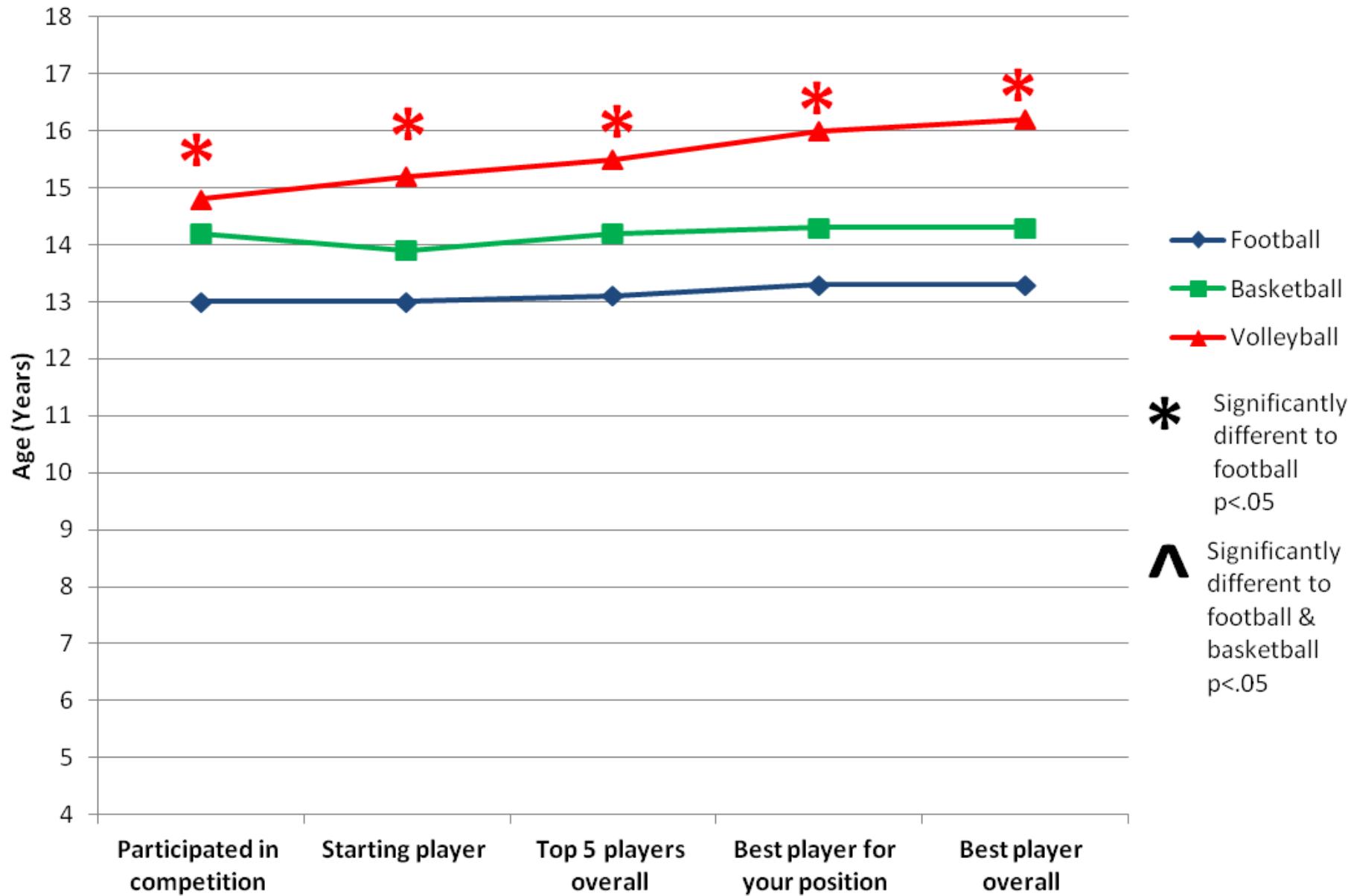
# Junior local competition milestones - Age when you first:



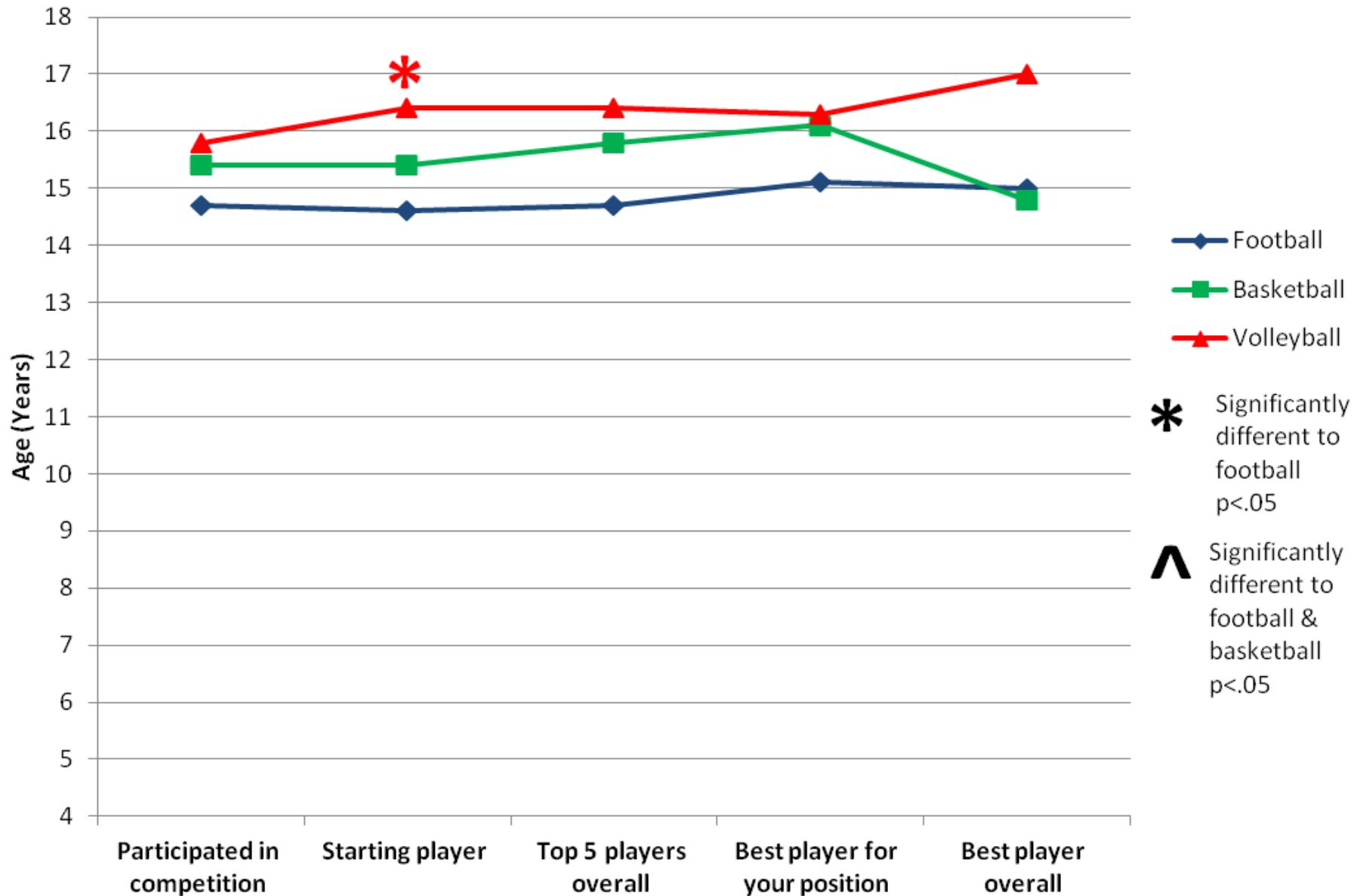
# Junior state competition milestones - Age when you first:



# Junior national competition milestones - Age when you first:



# Junior internat. competition milestones - Age when you first:



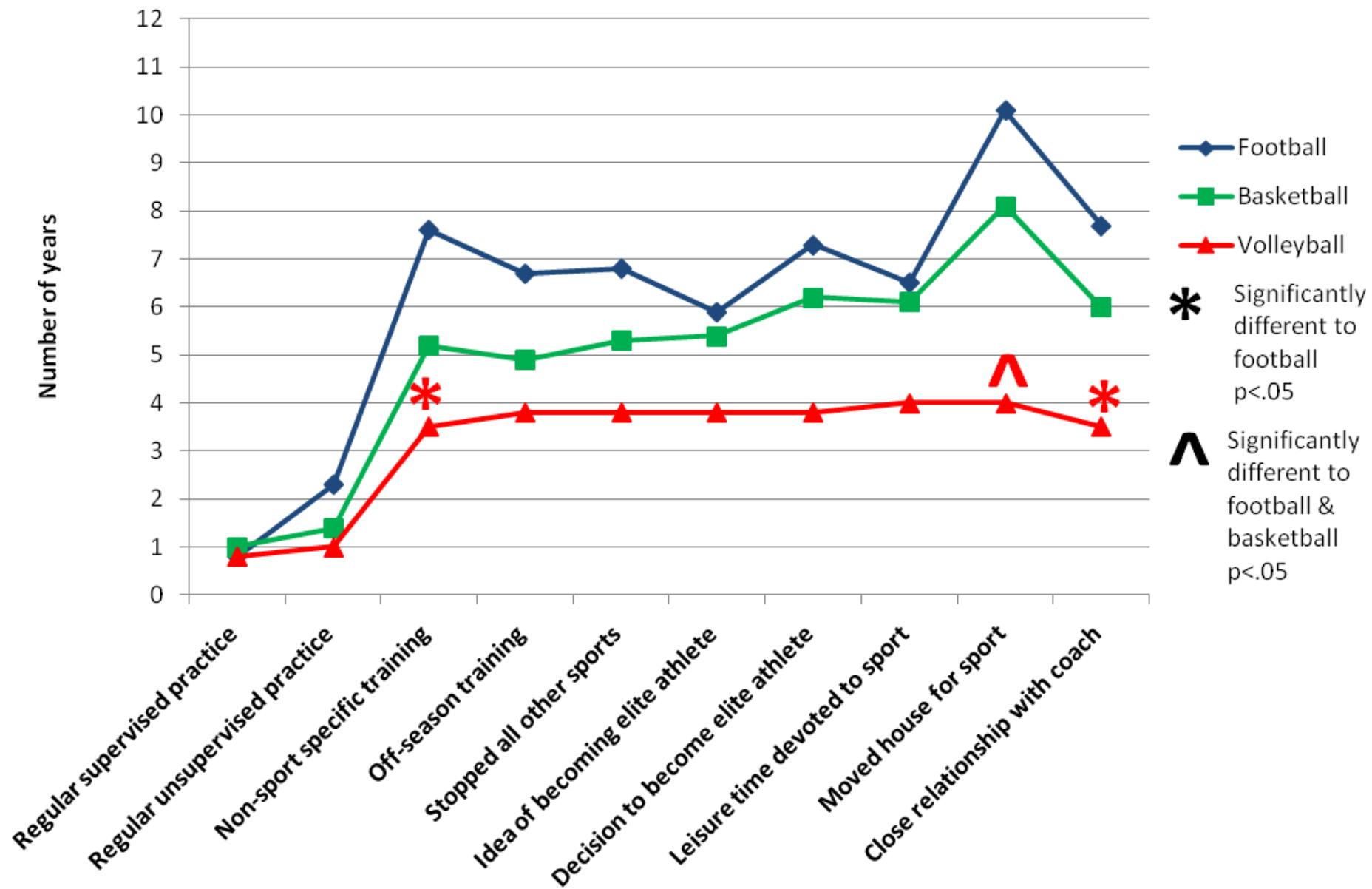
# Results

- Age at attainment of important sporting milestones
  - Significant differences between sports for almost all milestones except those relating to participation at the junior international level of competition
  - Volleyball players reach almost all milestones up to and including becoming a starting player at the international level of competition significantly later than football players
  - Basketball players also reach a number of general milestones plus all milestones at the junior local and the junior state levels of competition significantly later than football players

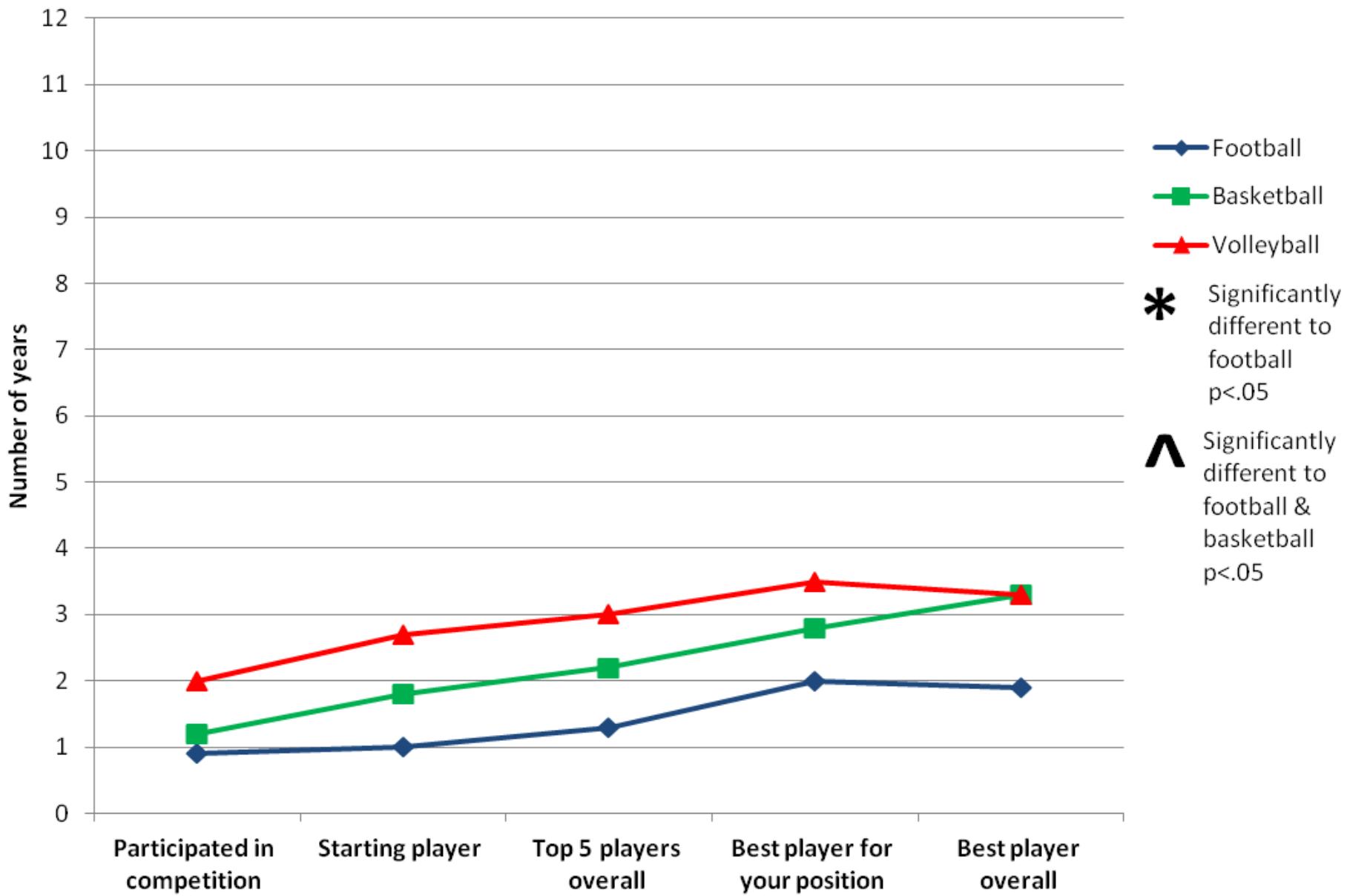
# Results

- Time course of career progression

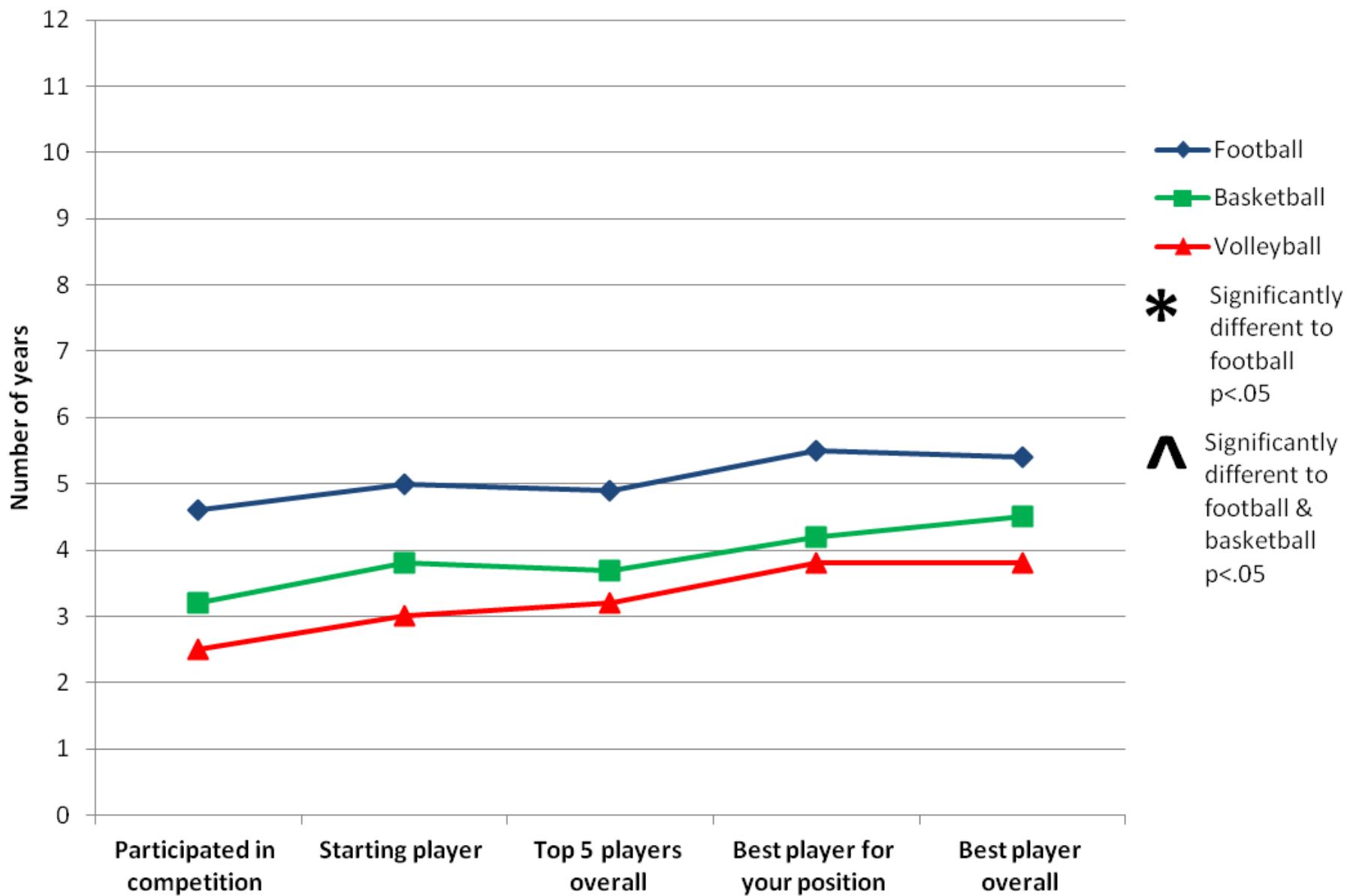
# General milestones – Number of years from first participation to first:



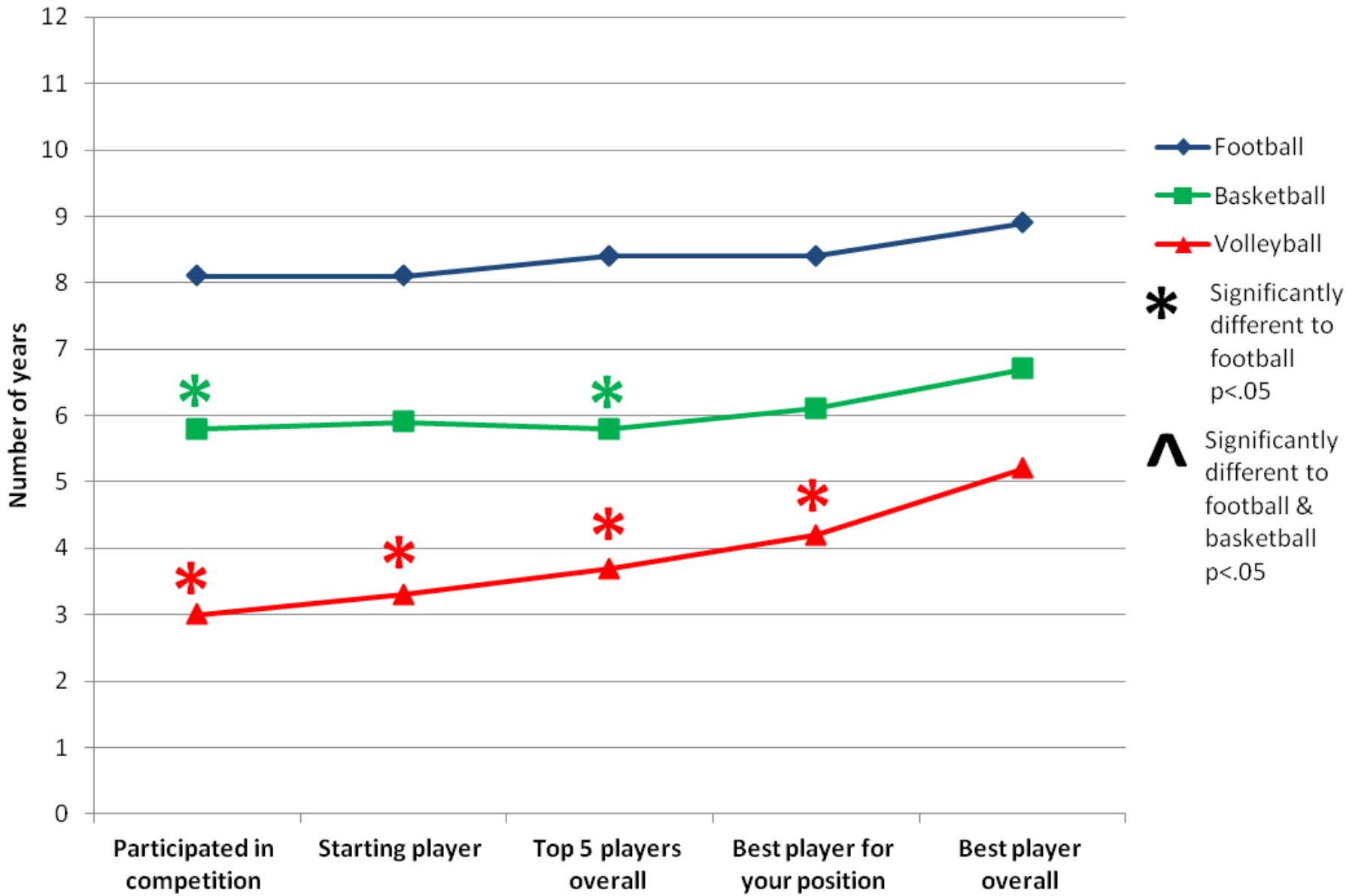
# Junior local competition milestones – Number of years from first participation to first:



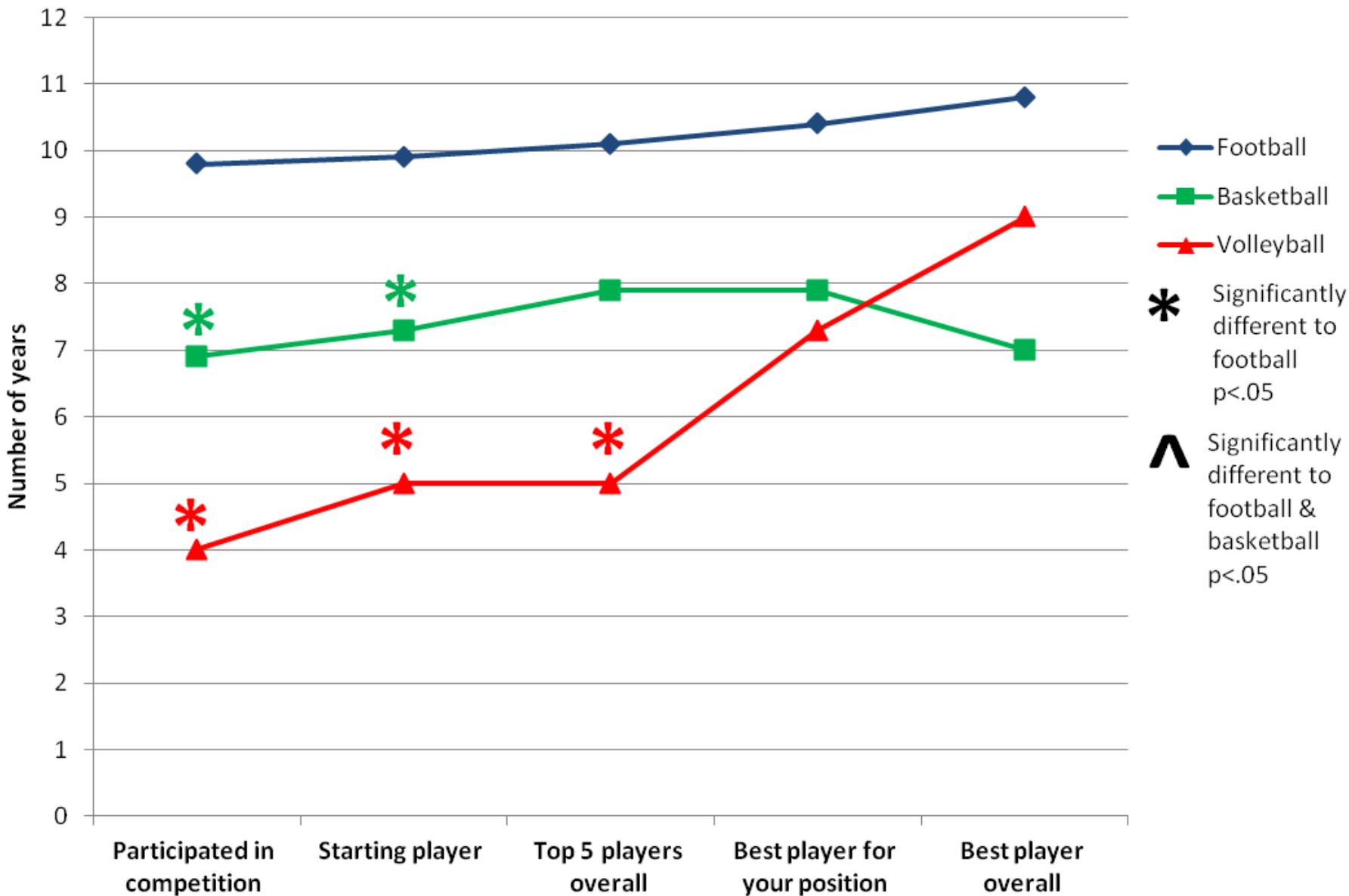
# Junior state competition milestones – Number of years from first participation to first:



# Junior national competition milestones – Number of years from first participation to first:



# Junior international competition milestones – Number of years from first participation to first:



# Results

- Time course of career progression
  - Few significant differences between sports for general milestones and milestones relating to participation at the local and state levels of competition
  - Volleyball players and basketball players appear to reach the national and international levels of competition with significantly less years of experience in their sport than football players

# Discussion

- Absolute ages at reaching important career milestones appear to be different between sports
  - Football as an early specialisation / early engagement sport?  
*(Ward et al. 2007; Ford et al. 2009)*
  - Necessity or availability of developmental programs?
- The relative time course of career progression is similar for sub-elite levels of competition however the duration of the transition from sub-elite to elite levels of competition varies
  - Competition structure?
  - Depth of competition?

# Implications

- Training
  - Need for developmentally appropriate programming during the transition from state level competition to national level
- Competition
  - At what age should national and international competitions commence?
- Skill acquisition research
  - 10 year rule not uniform across all sports

# Future research

- More athletes
- More sports
- More countries
- Females
- Senior / open level competition
- Practice / competition hours
- Skill level differences

# Acknowledgements

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# Questions



**[melissa.hopwood@live.vu.edu.au](mailto:melissa.hopwood@live.vu.edu.au)**