

Athletes Should Play More Sports: An Ecological Dynamics Perspective

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The Problem: Specialize Too Early

Why do people specialize

- ↑ incentives of professional and collegiate sports,
- ↓ Time/ interest in rec sports¹
- Pressure to “get ahead”²

More athletes have begun specializing in a sport from a young age^{1,2}

Specialization during adolescents leads to...

- ↑ **Injury** from repetitive movements and limited rest
- ↑ **Burnout** due to high pressure and monotonous training²
- ↓ **Fundamental movement skills** due to lack of variety^{1,3}
- ↓ **Social network** → ↓ perspectives/ experiences^{4,5}

But it seems to work so well...

→ Early specialization can improve the result in the short-term

⚡ But, this **does not** translate into long-term success (Fig 1 and 2)^{1,3}

Progress is not linear. A foundation is needed to build on

Kids need a wide variety of experiences to grow into more complete people and athletes

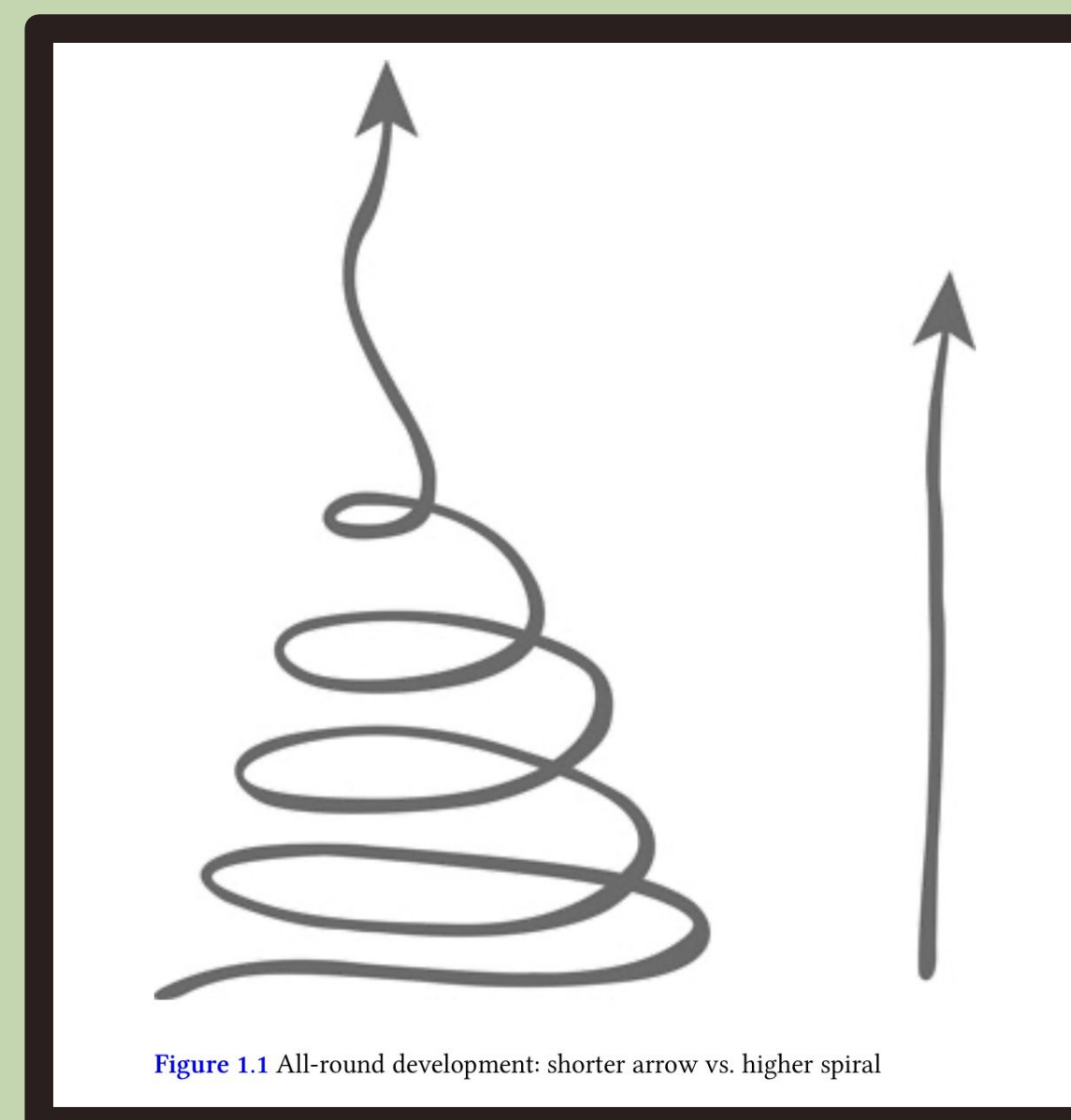


Figure 1.1 All-round development: shorter arrow vs. higher spiral

Fig. 1 (Wormhoudt, 2018)

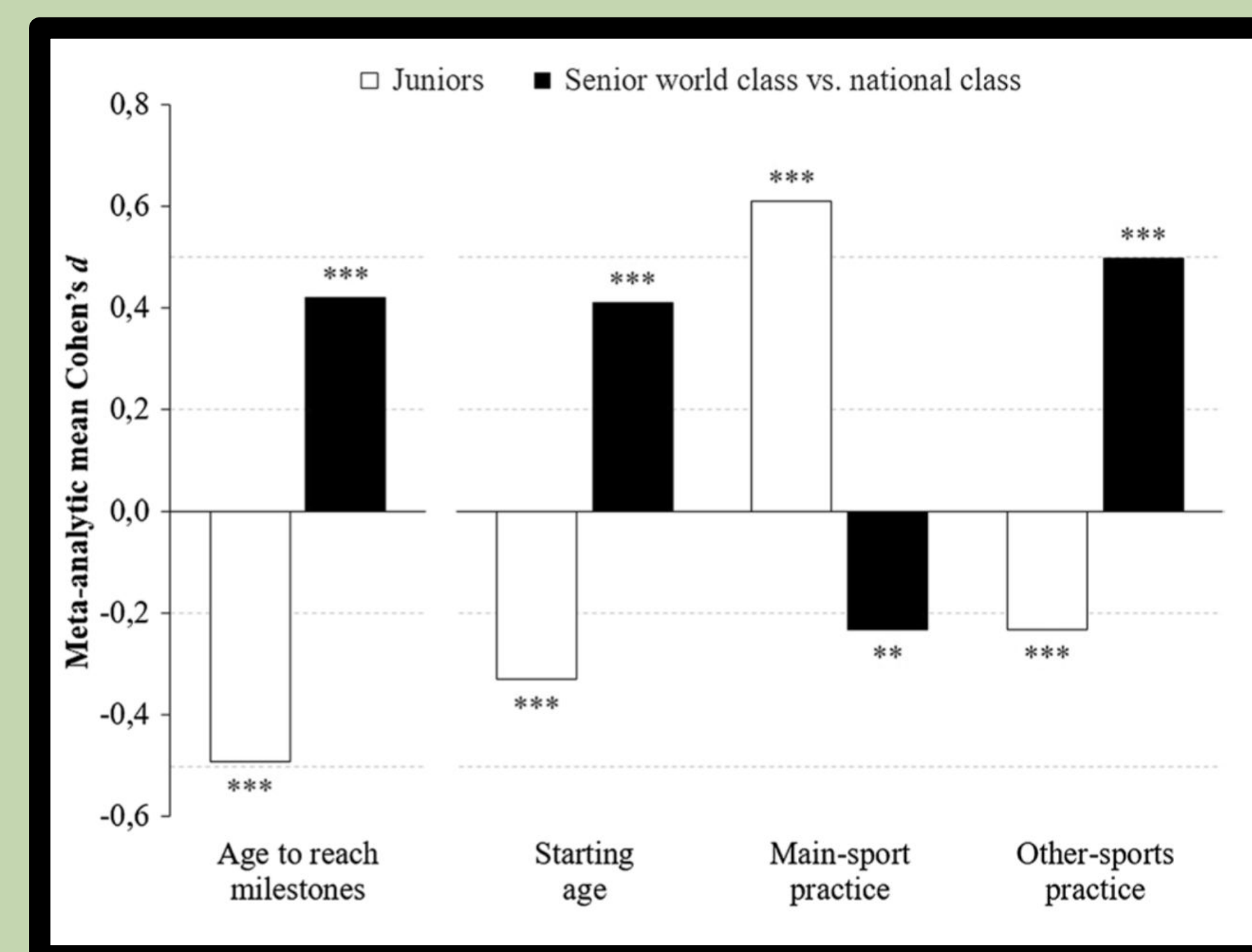
What the Data Says: Young Athletes Should Play Multiple Sports!

Elite athletes who practiced more sports in the youth...

1. Had more success at the professional level
2. Had longer professional careers
3. We injured less^{3,6}

though...

1. Had less success at the junior level
2. Took longer to reach major milestones



(Barth et. al., 2022).

Fig 2. Those who succeeded at the senior level played a greater number of sports in the youth compared to those who had junior level success.

Playing more sports exposes athletes to a wider range of experiences. It allows them to learn from different perspectives, environments, and situations.

Holistic Training: Ecological Dynamics

Ecological Dynamics: athletes learn by interacting with their environment, not through repetitive practice

- Solving problems > practicing solutions
- Perception and skills should be trained together
- Skill acquisition through changing the environment, not the instructions

Talent is built through unstructured play during early motor development¹

- Playing multiple sports → holistic development of **physical, psychological, and social abilities**^{1,2,4,7}
- Improves injury resistance through situation-specific adaptations⁶
- movement skills are transferable between sports (Fig. 3)

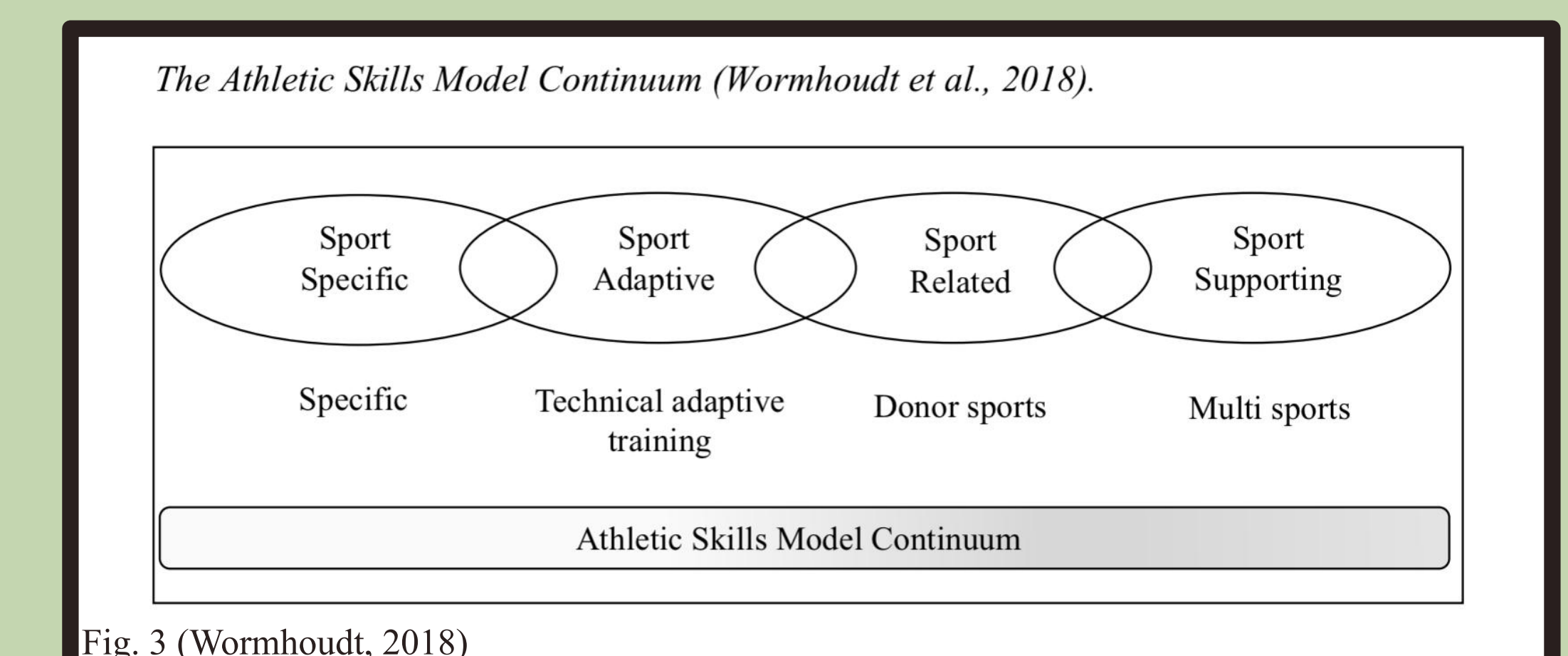


Fig. 3 (Wormhoudt, 2018)

Examples:

Basketball: tight space, quick decisions

Soccer: open space, situational awareness

Gymnastics: body control, safe landing

Conclusion:

- Early specialization, while beneficial in the short term, will limit overall development
- To prevent this, The Athletic Skills Model should be implemented to allow for natural development
- A natural implementation of this would be to encourage the participation of multiple sports.

Turn movers into athletes, then athletes into specialist

Methods:

- Google Scholar and PubMed were searched using combinations of keywords such as
- The snowballing approach, where references from relevant sources were analyzed for additional insight
- No strict limitations were placed, though priority was given to recent and highly cited literature.

References:

