

Learning from Elite & Recreational Soccer Girls about Sport Longevity & “Success” through the Quantification of Practice & Play Amounts: Methods & some Preliminary Data

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SOCCKER PATHWAYS PROJECT: <http://msl.kin.educ.ubc.ca/pathways>

Introduction

Practice, play, motivation, and participation in other sports impact successful transitions in soccer. These variables are understudied in girls' and women's sport.

Several models have been proposed to explain how athletes attain expertise in sport (and may conversely lead to drop-out from sport):

In **Deliberate Practice (DP) theory**³⁻⁴ time accumulated in DP is monotonically related to performance improvement. Deliberate practice is:

- Directly related to goals/weaknesses
- Cognitively effortful
- Designed by a coach, often alone, high on feedback

The **Developmental Model of Sports Participation (DMSP)**¹⁻² outlines [two pathways](#) leading to adult expertise:

- The early specialization pathway (based on **DP**)
- The early diversification pathway; involving late specialization, diverse sport involvement, lots of play

[A third pathway](#) has been identified, “**early majority engagement**”, shown to best characterize elite male soccer athletes⁵⁻⁷. Practice & play are started early in the primary sport, alongside other sports.

Objectives

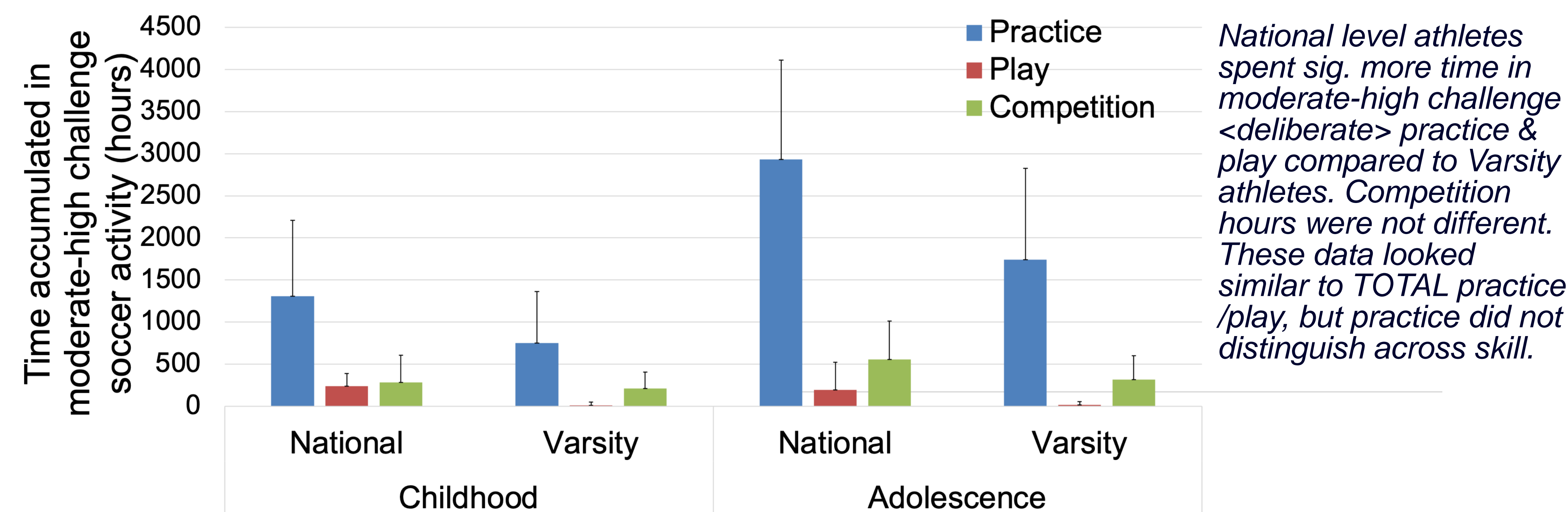
To evaluate how practice, play, competition, multi-sport participation and motivation impact success and define pathways in adolescent girls and adult women's soccer.

1) Study practice history profiles of highly successful women soccer players in reference to participation models & skill groups (completed)⁸

2) Evaluate relations between practice histories & performance /continued participation in adolescent girls & prospectively follow-up over ~3 yr period (in progress)

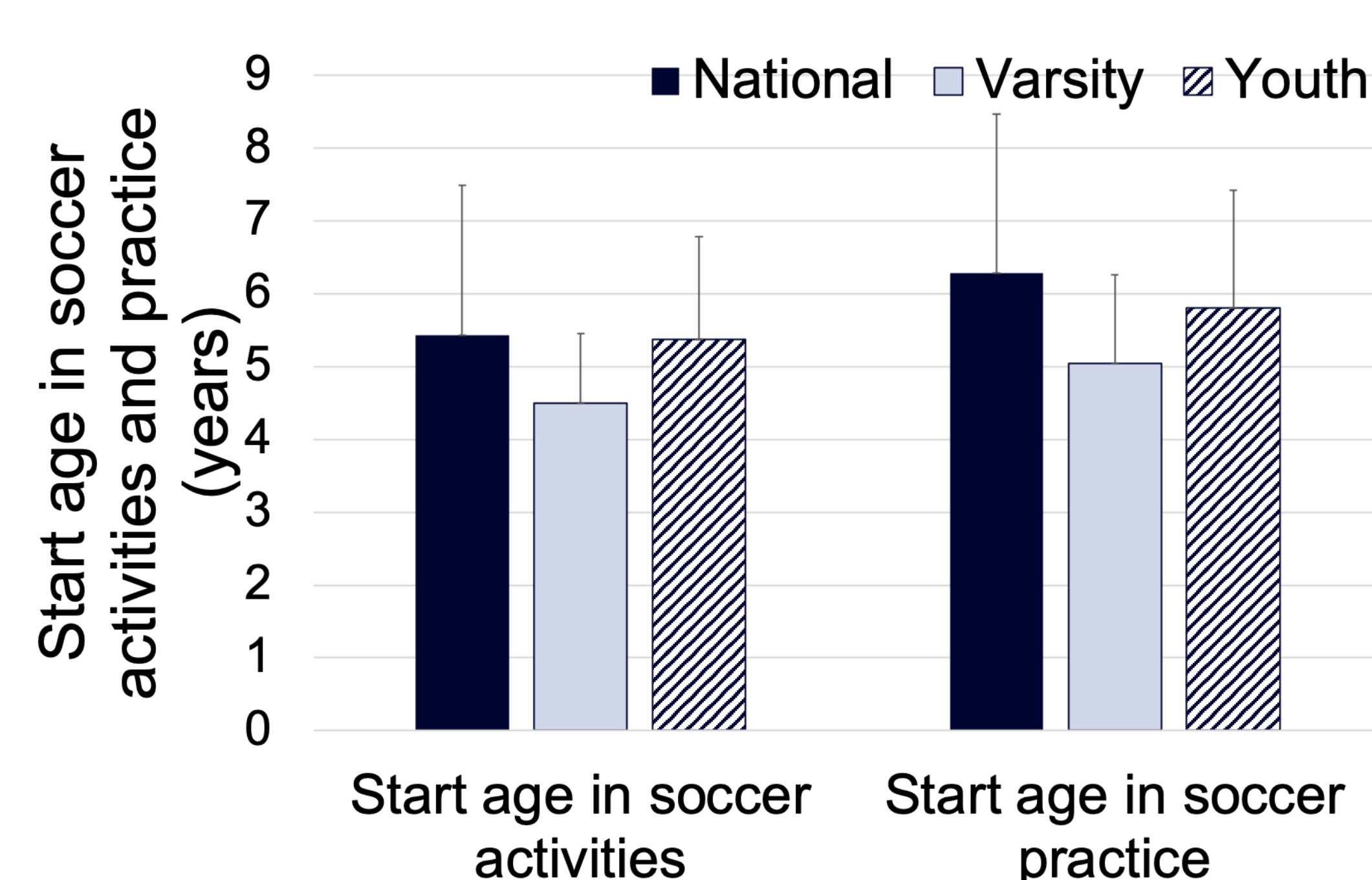
Practice profiles of Canadian National (n=21) and Varsity (n=24) women soccer players

Mean (SD bars) hours reported in activities rated as moderate-to-high in challenge across Childhood (5-12yr) and Adolescence (13-19yr).

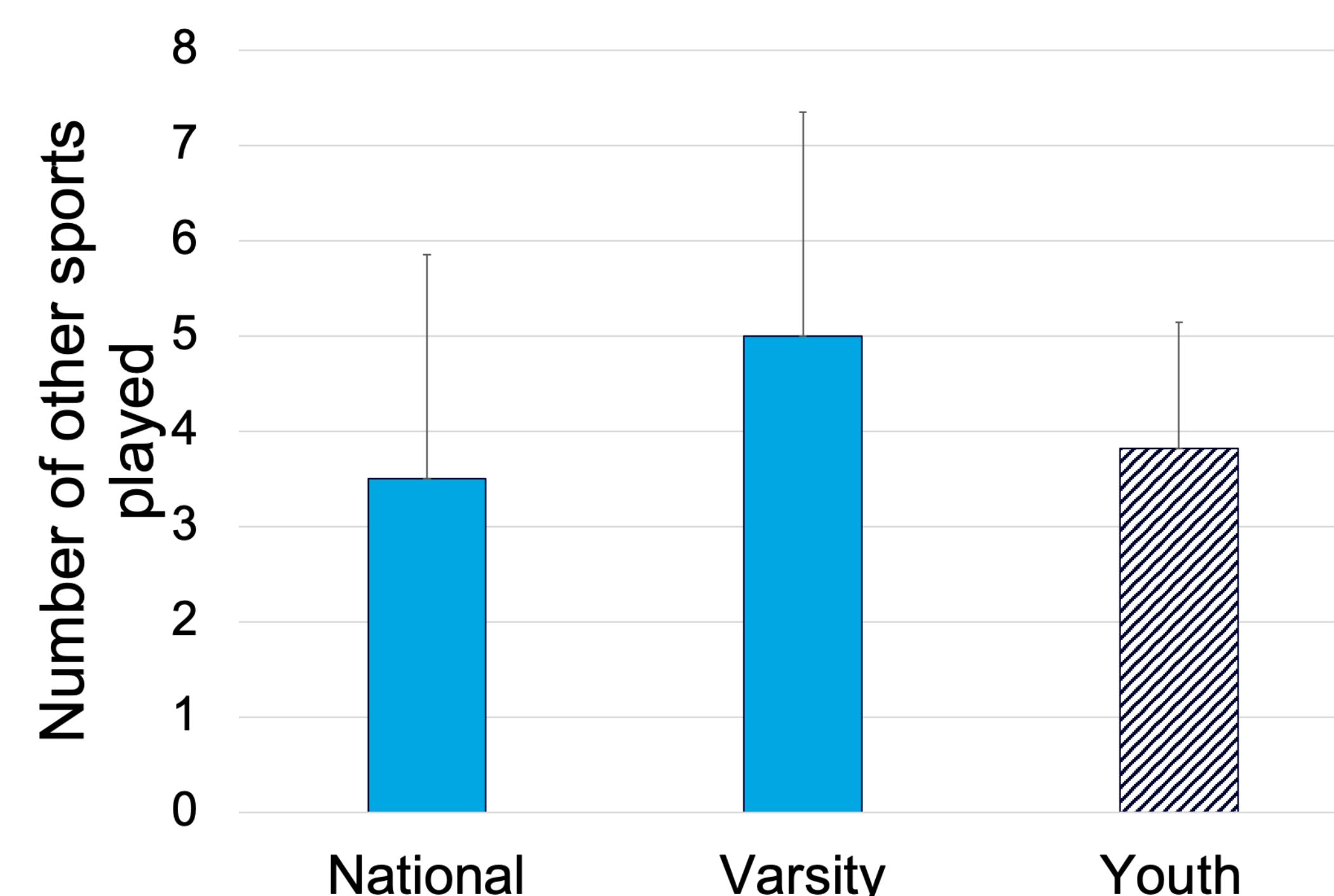


Developmental activities of Canadian women's National, Varsity, and competitive youth soccer players (n=30)

Mean (SD bars) start age in soccer activities and practice, and number of other sports played during development. Preliminary data for youth are not included in statistical analyses.



All competitive athletes engaged in soccer from an early age (~5-6yr), regardless of whether they played National or Varsity (or are currently playing at high-levels as a youth).



National athletes participated in sig. fewer other sports (~3) during development compared to Varsity women (~5). The current youth sample are similar to National.

Adolescence girls – Pathways' Methods

Participants:

- Adolescent girl's soccer athletes (ages 13-17 yr)
- Various levels of play (club, metro, provincial, national)
- Sample of parents also completing survey for reliability
- To date ~ 30 participants (high performance) recruited

Data Collection:

- Retrospective recall survey: history of soccer and sport activities
- Yearly follow up for the next 3-4 years

Survey (<http://msl.kin.educ.ubc.ca/pathways>):

Soccer activities	Other sports & activity participation	Behaviours, interests & motivation
<ul style="list-style-type: none"> • Practice (with & without a coach) • Play • Competition • Fitness • Perceived challenge • Injury history 	<ul style="list-style-type: none"> • Months of participation • # other sports • Practice (with & without a coach) • Competition 	<ul style="list-style-type: none"> • Motivations for participation • Measures related to <i>mental toughness, competitiveness & deliberate practice</i>

Conclusions: Successful women & girls in soccer show a pathway defined by early majority engagement in soccer. We still need to look at relations between these measures & drop-out/transitions through longitudinal follow-up.

References

1. Côté & Vierimaa. The developmental model of sport participation: 15 years after its first conceptualization. *Sci. Sport*. **29**, S63–S69 (2014).
2. Côté, Lidor, & Hackfort. ISSP position stand: To sample or to specialize? Seven postulates about youth sport activities that lead to continued participation and elite performance. *Int. J. Sport Exerc. Psychol.* **7**, 7–17 (2009).
3. Ericsson. Towards a science of the acquisition of expert performance in sports: Clarifying the differences between deliberate practice and other types of practice. *In of Sports Sciences*, **38**, 159-176 (2020).
4. Ericsson, Krampe, & Tesch-Romer. The role of deliberate practice in the acquisition of expert performance. *Psychological Review* **100**: 363-406. *Psychological Review*, **100**, 363–406. (1993).
5. Ford & Williams. The developmental activities engaged in by elite youth soccer players who progressed to professional status compared to those who did not. *Psychol. Sport Exerc.* **13**, 349–352 (2012).
6. Ford, Ward, Hodges, & Williams. The role of deliberate practice and play in career progression in sport: the early engagement hypothesis. *High Abil. Stud.* **20**, 65–75 (2009).
7. Hendry & Hodges. Early majority engagement pathway best defines transitions from youth to adult elite men's soccer in the UK: A three time-point retrospective and prospective study. *Psychol. Sport Exerc.* **36**, 81–89 (2018).
8. Hendry, Williams, Ford, & Hodges. Developmental activities and perceptions of challenge for National and Varsity women soccer players in Canada. *Psychol. Sport Exerc.* **43**, 210–218 (2019).

