

Wojtowicz, Magdalena, PhD, C.Psych

Department of Psychology, York University, Toronto ON

Joe Baker, PhD; Nick Wattie, PhD; Kathryn Johnson, PhD

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Supporting Athlete Success: Developing Multi-dimensional Profiles for Athlete Development

Athlete selection remains a central element of many athlete development systems and a regular part of coaching practice. Sport stakeholders are often tasked with selecting and identifying athletes with the greatest potential for success and provide these athletes with the most beneficial environment for maximizing their development. However, the low level of accuracy of talent selection initiatives, suggests coaches, scouts and recruiters have a limited understanding of what potential 'is' not to mention 'how' it could be best nurtured.

Furthermore, athletes often spend a limited amount of time in development programs, and it is unclear what elements influence athlete retention, dropout, and/or overall success. This is particularly true for adolescent athletes. In the absence of relevant and specific knowledge, decisions are often based on untested assumptions and inaccurate information which inevitably affect the experience and success of youth athletes. To this end, the purpose of this project is to:

1. Develop a multisport normative databank that will include new metrics for understanding and promoting athlete development including psychological characteristic, cognitive abilities, as well as physical skills, and developmental histories.
2. Create multi-dimensional profiles of athlete characteristics, through identifying psychological, cognitive, physical, and developmental strengths and weaknesses for individual athletes.
3. Support athlete success through examining relationships between these multi-dimensional variables and indicators of athlete performance and retention within a development program.

This project will progress through 3 phases. In phase 1, we will build a multi-disciplinary, multi-sport normative databank through collecting critical metrics on ~700 adolescent and young adult athletes (from 20 different sports) involved in the Ontario High Performance Sport Initiative (OHPSI) through the Canadian Sport Institute Ontario (CSIO). These metrics will include information about athletes' sporting backgrounds, as well as a range of psychological, physical, and cognitive measures. In phase 2, we will use the data collected to explore multi-dimensional profiles of athlete characteristics. These profiles will incorporate the psychological, physical, and cognitive strengths and weaknesses for each athlete in the development system.

In phase 3, we will focus on how to better support athlete development and success. To do that, we will employ a mixed model approach that first examines the associations between the multi-dimensional profiles identified in Phase 2 and metrics of athlete development within the OHPSI program as well as whether athletes remained in the program. We will then explore the experience of a subset of youth athletes who exited the OHPSI program during the study. Qualitative open-ended interview questions will examine the needs of the athletes, perceived supports, positive and negative experiences within the program, and reasons for leaving. To our knowledge, this research program is the first of its kind to develop a large-scale, multisport, multi-dimensional understanding of youth athletes to inform athlete development strategies. Together, this knowledge will provide a foundation for tracking athlete development over time as well as creating individualized athlete development and sport-specific initiatives.