Developmental Trajectories and Training Histories of Canadian and Australian Paralympic Athletes

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Pathway to Expertise
Systematic Review
Very little examining Para sport athletes’ development trajectories and training histories

Wheelchair Basketball
Examined Wheelchair Basketball Athletes’ Developmental Trajectories and Training Histories

### Developmental Milestones:
- Indicators of career advancement and sporting progression
  - i.e.:
    - Starting various forms of training
    - Developing relationship with coaches
    - Making a conscious decision to become an elite athlete

### Performance Milestones:
- Successful outcomes/events that can increase athlete commitment, enhance motivation and alter resource availability
  - i.e.:
    - Debut at the national/international level of competition
Developmental Trajectories:

- Athletes with a congenital impairment reached developmental milestones at a significantly younger age.
- Athletes with an acquired impairment reached late key performance milestones at a similar age.
Wheelchair Basketball vs. Able-Bodied Basketball

- Developmental trajectory of athletes with a congenital impairment more similar to able-bodied athletes
- Performance milestone similar across all three groups


**Implications:**
- Timing of athletes’ injury
- Underlying mechanisms

**Future Research:**
- Training and Other Sport Histories
- Reduce Noise in Acquired Group

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Paralympian Search
To develop a better understanding of athletes attending the Paralympian Search

New grouping for nature of impairment

• Congenital
• Acquired pre-adolescence (Birth to 11.99 years old)
• Adolescence (12 to 17.99 years old)
• Early Adulthood (18 to 24.99 years old)
• Adulthood (25 years old and older)

Pathway to Expertise

- Paralympian Search Survey
- 225 participants from 10 events
- Athletes in later acquired groups (i.e., early adulthood/adulthood) started Para sport and sport-specific training at a significantly later age.
- Athletes with a congenital impairment spent less time (in years) in other Para sports in comparison to the early adulthood and adulthood group

Pathway to Expertise

Canadian and Australian Paralympic Athletes
Comprehensive examination of Para sport athletes’ developmental trajectories and training histories
Pathway to Expertise
Athletes in the Adulthood group reached the majority of developmental and performance milestones at a significantly older age than other groups.

Athletes in the Early Adulthood group reached the majority of developmental and performance milestones at a significantly later age than athletes in the Congenital/Pre-Adolescent group.
• Athletes in the Adolescent and Early Adulthood group had similarities in mid-career milestones while there were similarities between Adolescent and Congenital/Pre-Adolescent group with respect to early-career milestones

• No significant differences between the congenital/pre-adolescent groups regarding their milestone trajectories
Study 5: CA & AUS Para Athletes

- AB Sports (89%)
  - PA (69%)
  - AD (94%)
  - EA (84%)
  - AH (97%)
- Experience
  - 9.47 years (SD=7.83)
  - Recreational (n=5) to International (n=10)
Study 5: CA & AUS Para Athletes

• Other Para Sports:
  • 2.13 sports (SD=1.47)
  • Most common sports:
    • Wheelchair Basketball (n=24)
    • Para Swimming (n=15)
    • Wheelchair Tennis (n=13)
    • Para Athletics (n=12)
Study 5: CA & AUS Para Athletes

- Most common setting:
  - Club (n=86)
  - Community (n=12)
  - School (within, n=12; between, n=6)

- Most common sport delivery:
  
  General = Train and compete with AB
  Parallel = Train with AB but compete in Para setting
  Unified = AB and Para train and compete in Para setting
  Segregated = Train and compete with Para athletes only
Study 5: CA & AUS Para Athletes

- Most common setting:
  - Club (n=86)
  - Community (n=12)
  - School (within, n=12; between, n=6)

- Most common sport delivery:
  - General (57%)
  - Parallel (17%)
  - Unified (15%)
  - Segregated (11%)
Implications & Future Work

• No single pathway
  • Support and resources will differ

• Setting = club-driven/sport delivery = general
  • Detrimental or beneficial experience?
Implications & Future Work

- In-depth training analysis/sport-specific considerations
- External factors (i.e., family, resources, funding)
- In-depth interviews to accommodate quantitative analysis
Questions?

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