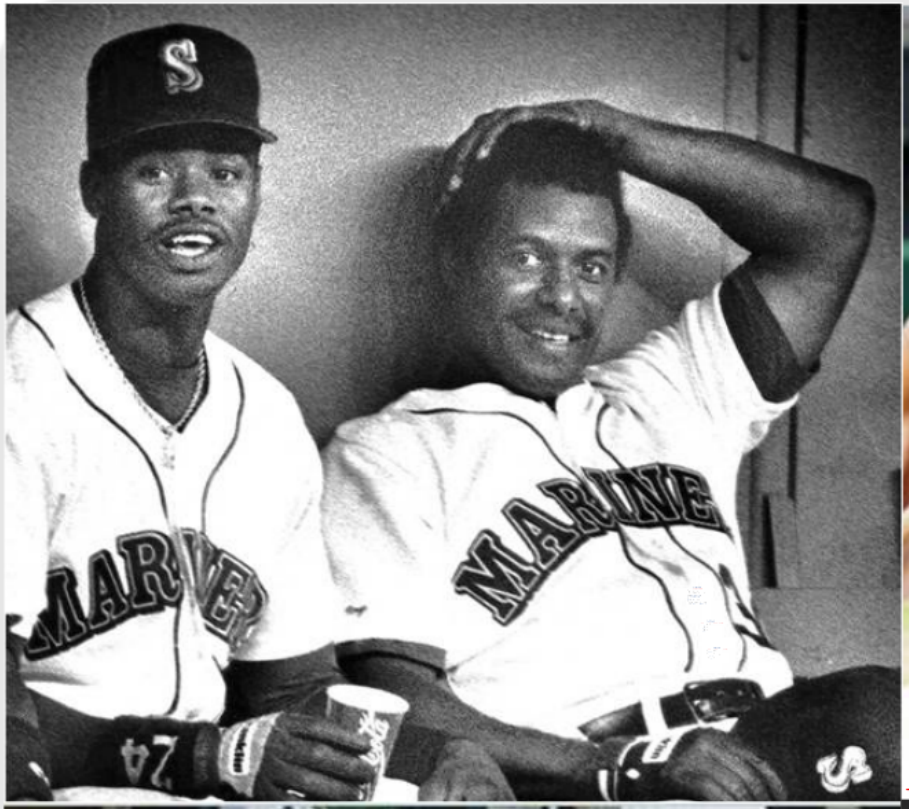
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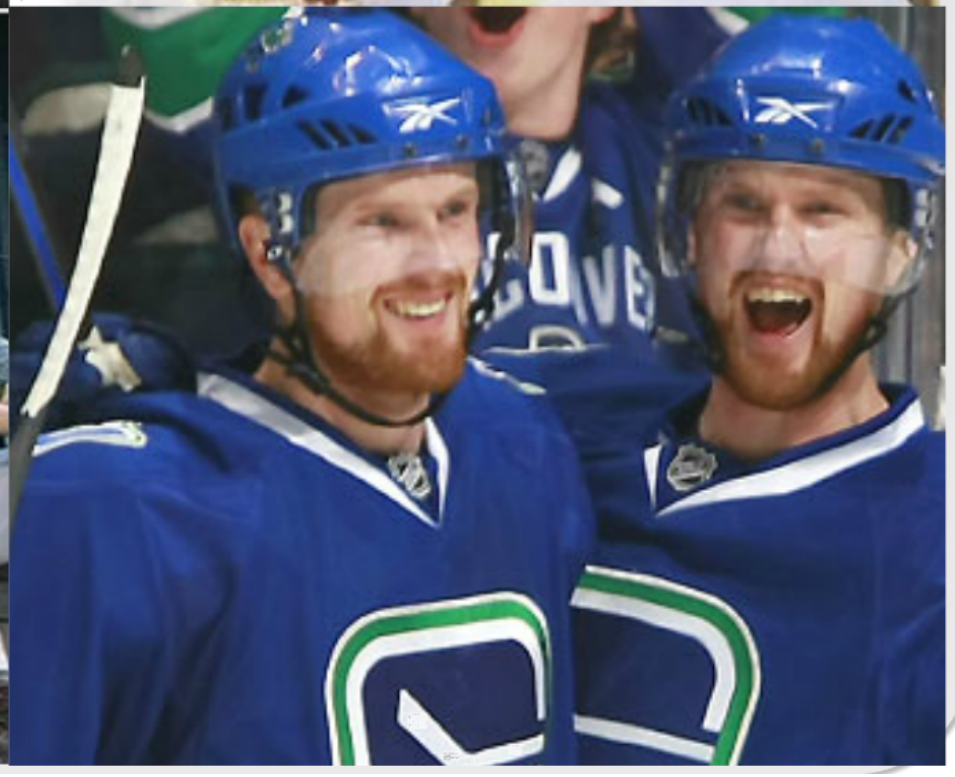

Sport expertise: A family affair?

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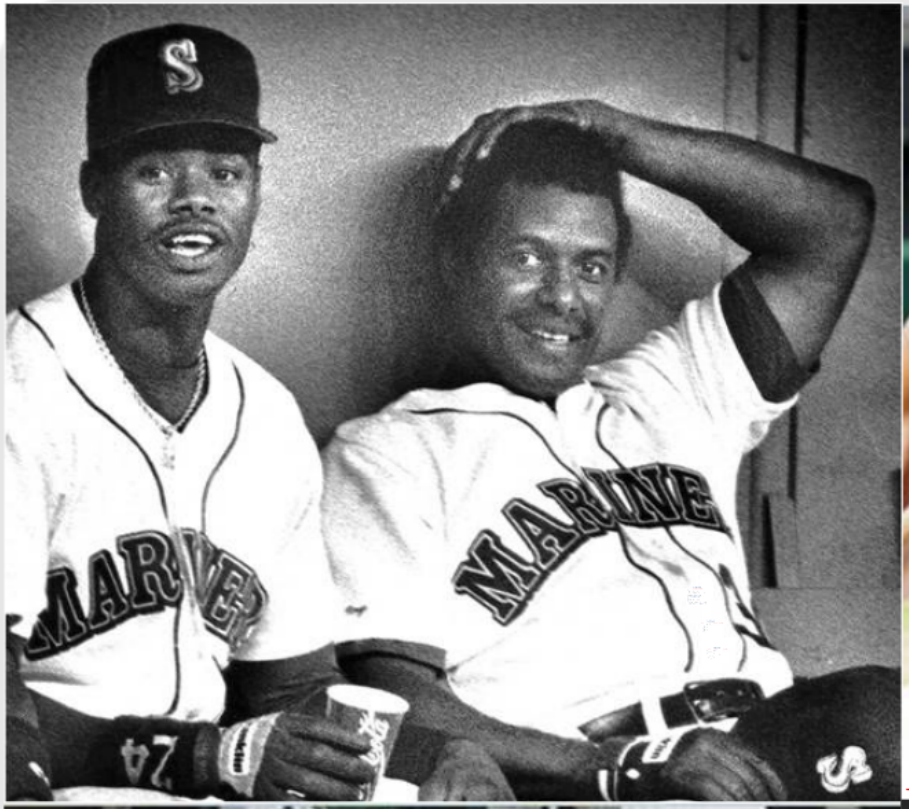
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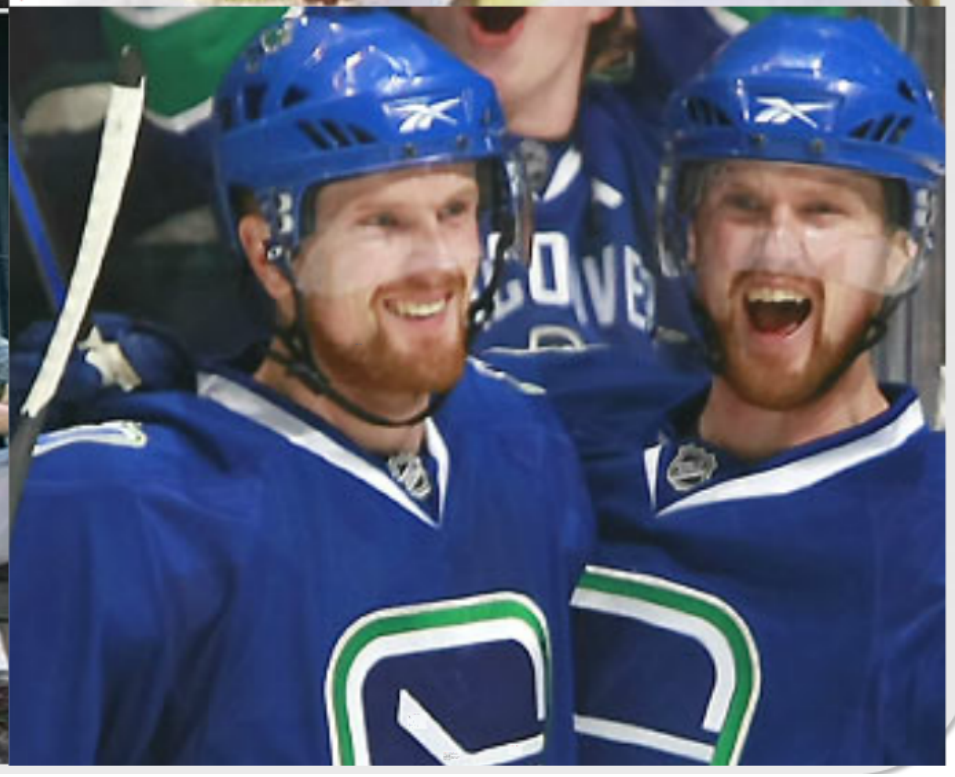


Background

Parents

- Changing roles throughout development
- Provision of resources
- Relationships between parental physical activity behaviours and child physical activity

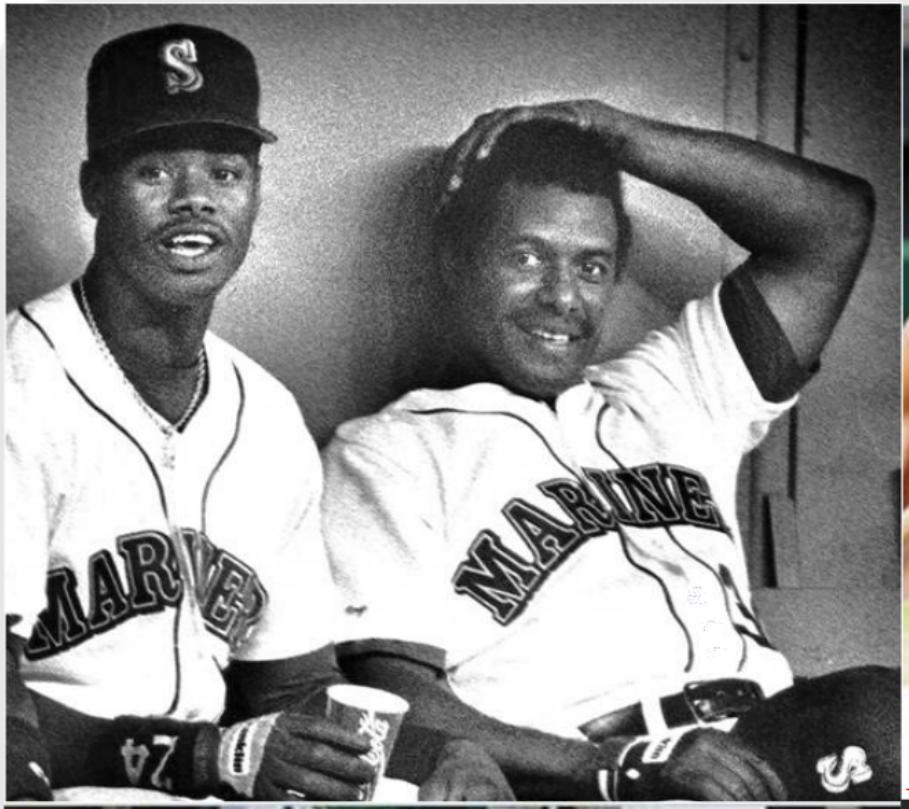
Bloom, 1985; Côté, 1999;
Edwardson & Gorely, 2010; Pugliese & Tinsely, 2007

Background

Siblings

- Siblings as competitors, rivals, team mates, motivators, and/or supporters
- Sibling relationships
- Siblings in high performance sport

Abel & Kruger, 2007; Davis & Meyer, 2008;
Horn & Horn, 2007; Sulloway & Zweigenhaft, 2010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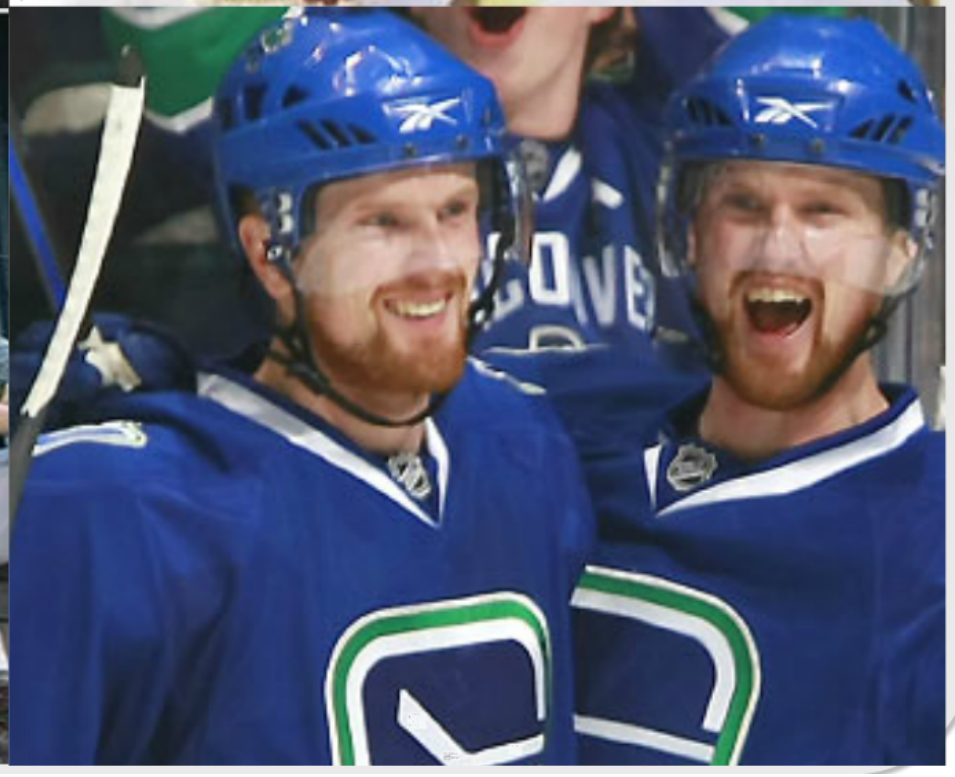


What is the relationship between familial involvement in sport and physical activity and sport expertise?

Methods

Participants

229 athletes

n = 75 n = 154

n = 150 n = 79

34 sports

age = 23.28 years

3 skill groups:

- Elite (senior international; n = 139)
- Pre-elite (junior international or senior national; n = 33)
- Non-elite (junior local / provincial / national or senior local / provincial; n = 57)

Methods

Procedures

DEVELOPMENTAL HISTORY OF ATHLETES QUESTIONNAIRE (DHAQ)

For each immediate family member:

- Demographics / characteristics
- Participation in physical activity during the time living with the athlete
  - General fitness activities
  - Recreational sport
  - Competitive sport
- Participation in competitive sport during any time in their lives
  - Sport type
  - Level of competition

Methods

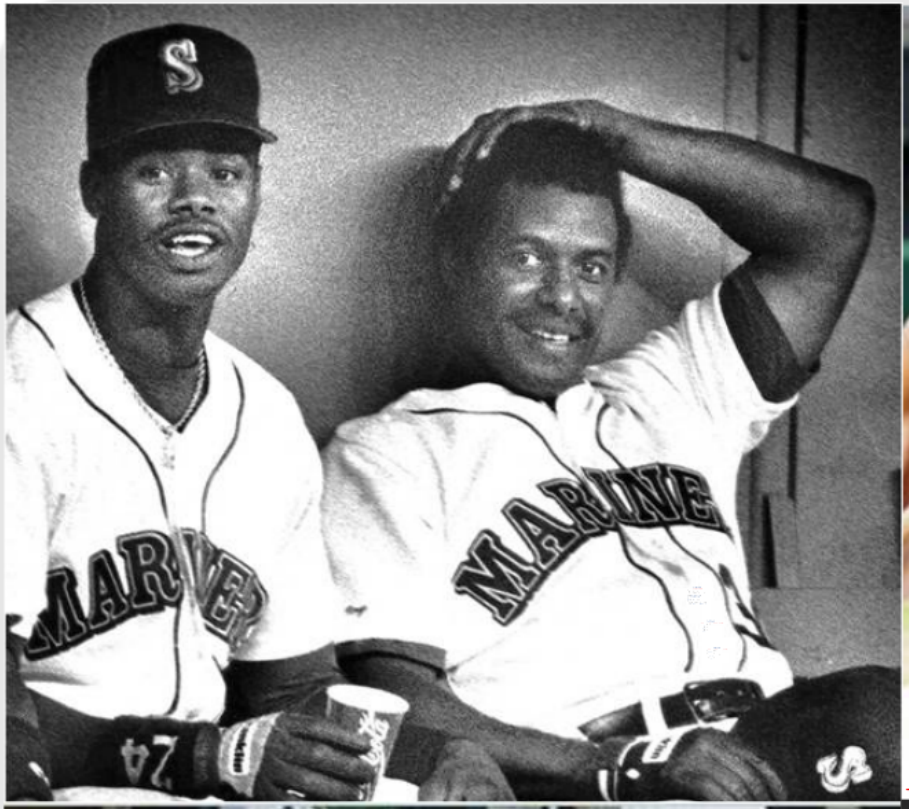
Statistical Analysis

Categorical variables

- Pearson chi-square tests for independance
  - Monte-carlo method ($p < .05$)
  - Adjusted standardised residuals (> 2.0)

Continuous variables

- One-way between subjects ANOVAs
- Tukey's HSD post-hoc tests ($p < .05$)
- Violation of Levene's test for homogeneity of variance
  - Welch's F
  - Games-Howell post-hoc tests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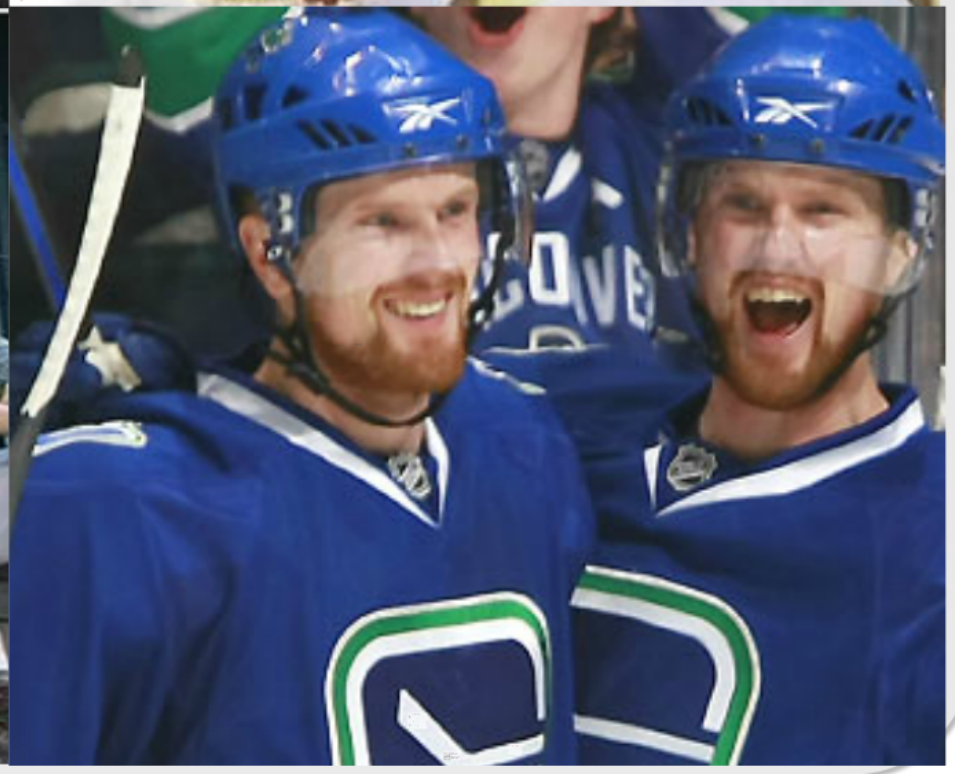


Results: Parents

Parental characteristics

- Biological mothers and fathers only
- Almost all parents grew up in the same country as the athlete
- No skill group differences in parent age at birth of athlete

  (mother: M = 29.24, SD = 4.93, $F(2,215) = 1.32$, $p = .27$, $\eta 2 = .81$;
  father: M = 32.12, SD = 5.29, $F(2,209) = 1.42$, $p = .25$, $\eta 2 = .01$)

- Parents of non-elite athletes lower level of education

  ($\chi 2\ (4,229) = 12.11$, $p = .02$, $\tau b = .13$)

- Elite athletes stopped living with their mother at a significantly younger age than non-elite athletes

  (Non elite: M = 20.09, SD = 4.41; Elite: M = 19.81, SD = 3.75; $F(2,226) = 3.57$, $p = .03$, $\eta 2 = .03$)

Results: Parents

Parental participation in physical activity during the time living with the athlete

- Mothers of elite athletes 2.5 x more likely to have participated in general fitness activities than mothers of non-elite athletes
  (χ^2 (2,229) = 11.25, $p < .01$, V = .22)

- Elite athletes 2.1 x more likely than non-elite athletes to have at least one parent who participated in recreational sport
  (χ^2 (2,229) = 7.04, $p = .03$, V = .18)

- Elite athletes 3.1 x more likely than pre-elite athletes to have at least one parent who participated in competitive sport
  (χ^2 (2,229) = 7.54, $p = .02$, V = .18)

Results: Parents

Parental participation in competitive sport during any time in their life

- Fathers of elite athletes 2.3 x more likely to have participated in competitive sport than fathers of non-elite athletes

  ($\chi 2$ (2,228) = 7.17, p = .03, V = .18)

- Parents of elite athletes more likely to have participated in competitive sport at the elite level, whereas parents of non-elite athletes more likely to have participated at the non-elite level

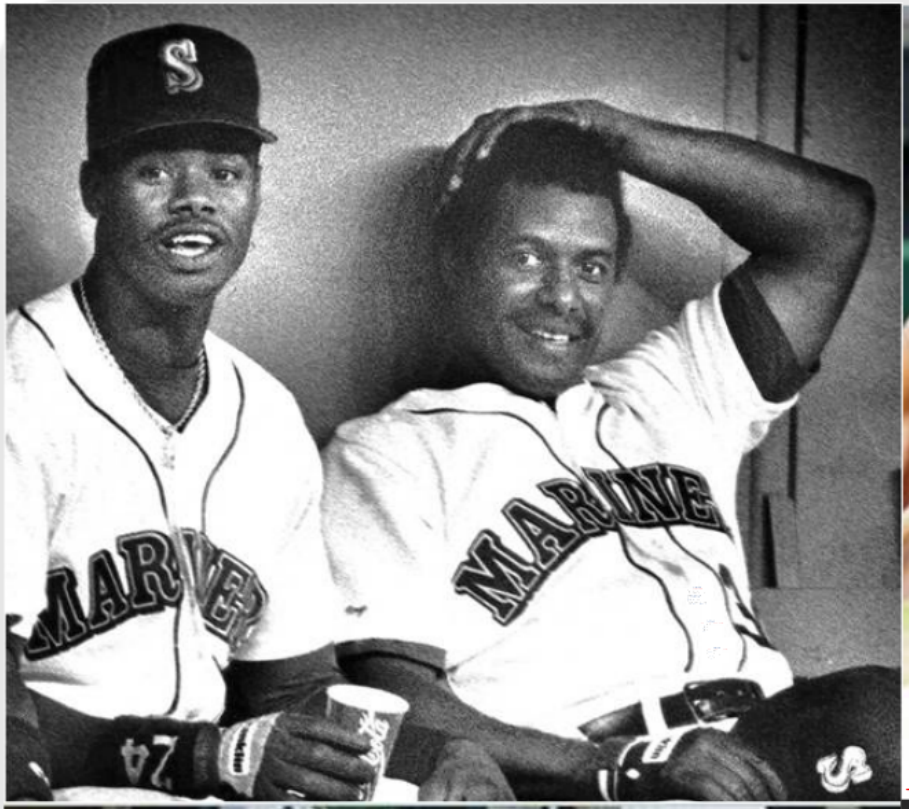
  ($\chi 2$ (4,181) = 15.97, p < .01, τb = .27)

- No skill level differences in likelihood of parents participating in the same sport as the athletes main sport

  ($\chi 2$ (2,229) = 0.08, p = .96, V = .02)

- Among parents who did participate in the same sport as the athletes main sport, there was a near-significant trend towards parents of elite athletes having participated at the elite level, while parents on non-elite athletes participated at the non-elite level

  ($\chi 2$ (4,66) = 9.16, p = .05, τb = .34)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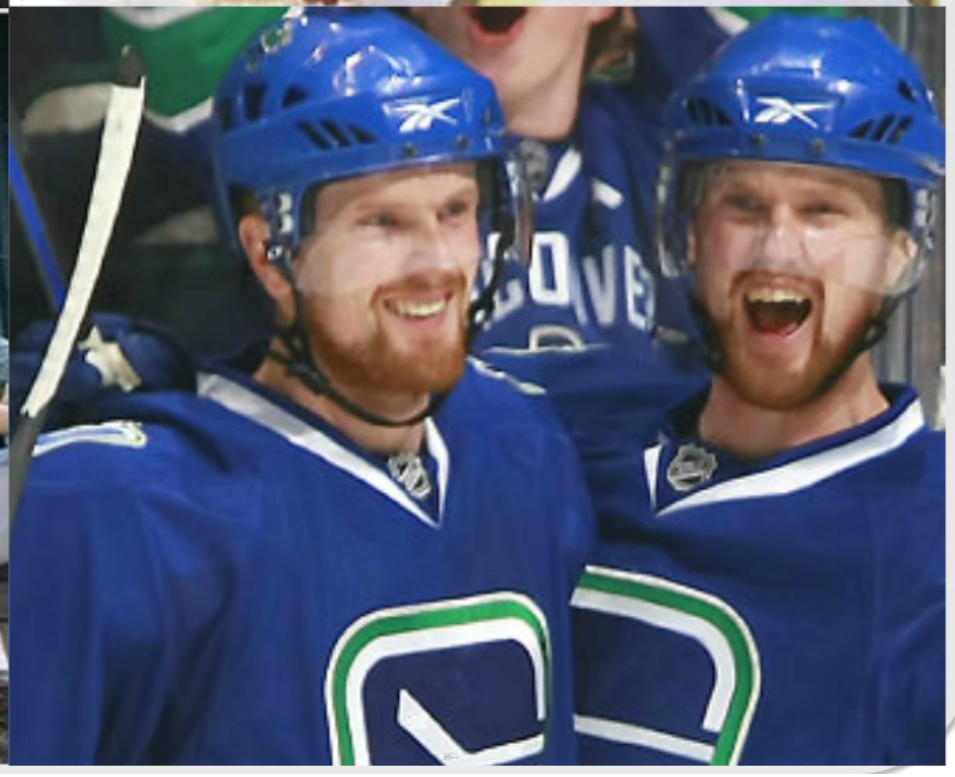


Results: Siblings

Sibling characteristics

- 373 siblings
  - 196 older
  - 169 younger

- No skill group differences in number of siblings
  (M = 1.64, SD = 1.06, $F(2,228) = 1.53$, $p = .22$, $\eta 2 = .01$)

- Elite athletes more likely to be later-born children than non-elite and pre-elite athletes
  ($\chi 2\ (4,229) = 15.10$, $p < .01$, $V = .18$)

- No skill group differences in age spacing between athletes and their older siblings or their younger siblings
  (older: M = 4.29, SD = 3.19, Welch's $F(2,37.54) = 0.33$, $p = .72$, $\eta 2 < .01$;
  younger: M = 4.27, SD = 2.66, $F(2,168) = 0.21$, $p = .81$, $\eta 2 < .01$)

- No skill group differences in sibling sex
  ($\chi 2\ (2,373) = 3.56$, $p = .16$, $V = .10$)

Results: Siblings

Sibling participation in physical activity during the time living with the athlete

- Older siblings of elite athletes 2.4 x more likely to have participated in general fitness activities than older siblings of non-elite athletes
  ($\chi 2$ (2,196) = 6.20, p = .05, V = .18)

- Older siblings of elite athletes 2.3 x more likely to have participated in recreational sport than older siblings of non-elite athletes
  ($\chi 2$ (2,196) = 6.63, p = .04, V = .18)

- Younger siblings of elite athletes 3.8 x more likely to have participated in competitive sport than younger siblings of non-elite athletes
  ($\chi 2$ (2,169) = 11.77, p < .01, V = .26)

Results: Siblings

Sibling participation in competitive sport during any time in their life

- Among siblings that did participate in competitive sport:
  - Younger siblings of elite athletes more likely to have participated at the pre-elite level while younger siblings of non-elite athletes more likely to have participated at the non-elite level

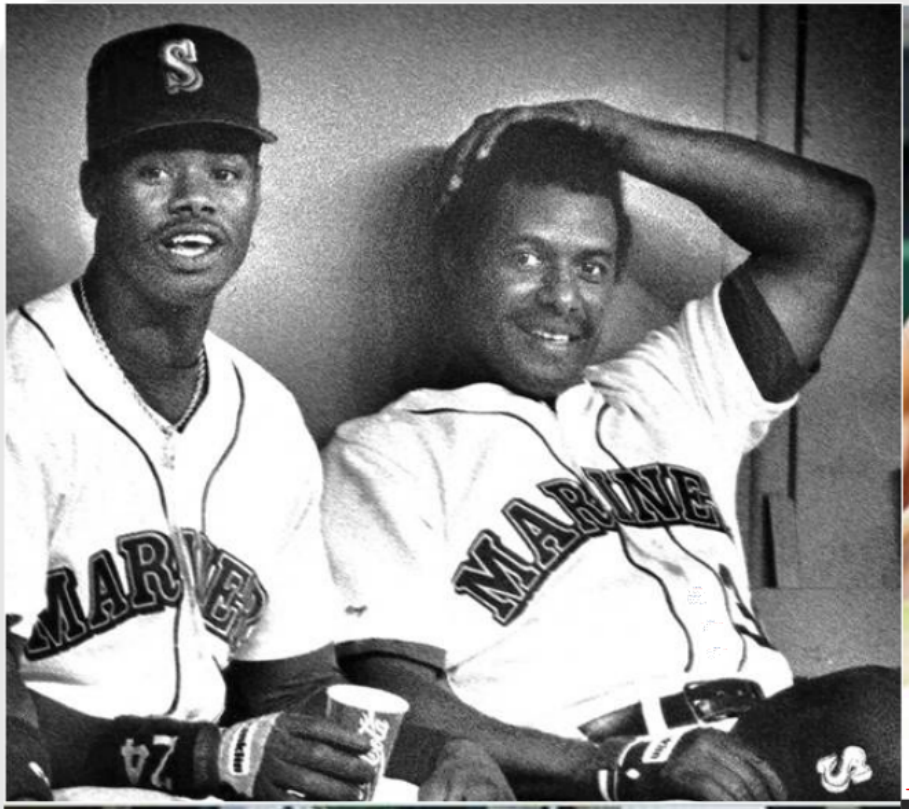
    ($\chi 2$ (4,134) = 13.52, $p < .01$, $\tau b = .29$)

  - Older siblings of elite athletes less likely to have participated in the athlete's main sport than older siblings of non-elite athletes

    ($\chi 2$ (2,146) = 6.62, $p = .04$, $V = .21$)

- Among siblings that did participate in the athlete's main sport:
  - Younger siblings of elite athletes more likley to have participated at the pre-elite level while younger siblings of non-elite athletes more likely to have participated at the non-elite level

    ($\chi 2$ (4,80) = 9.41, $p = .04$, $\tau b = .32$)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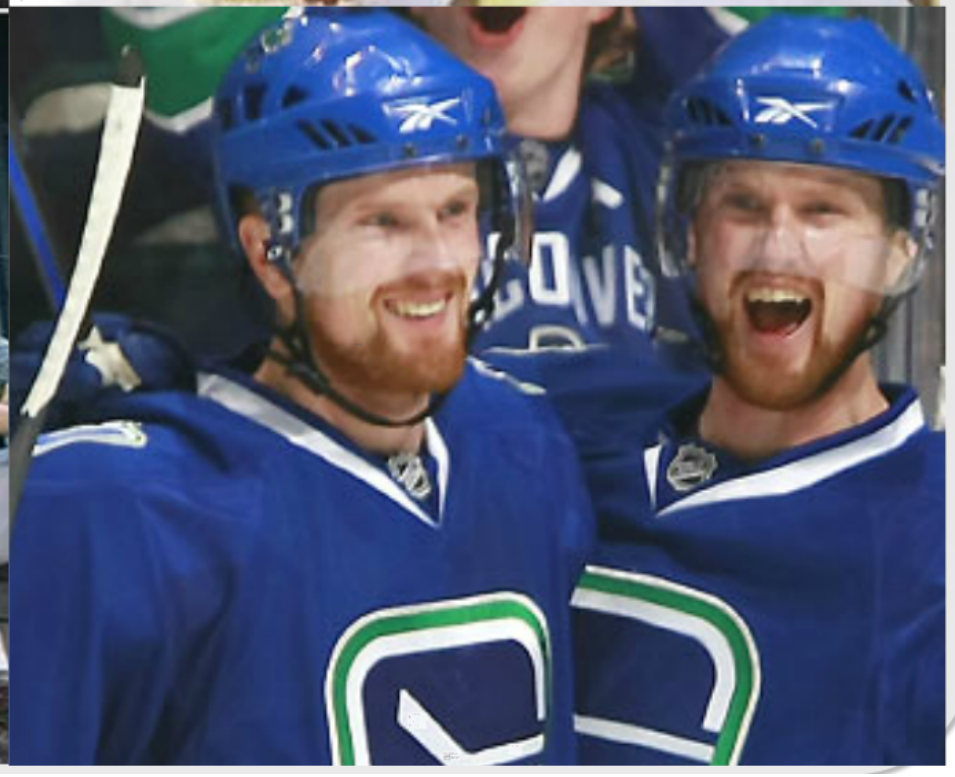

Summary

- Families of elite athletes appear to be more physically active than families of non elite athletes
- Parents and older siblings may act as role models and socialising agents for sport participation
- Sibling dynamics play an important role in sport expertise development
- Previous family involvement in high performance sport appears to facilitate sport expertise development
- Association between socio-economic status and sport expertise suggests potential barriers to sport participation and excellence

Thank you!

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Questions?

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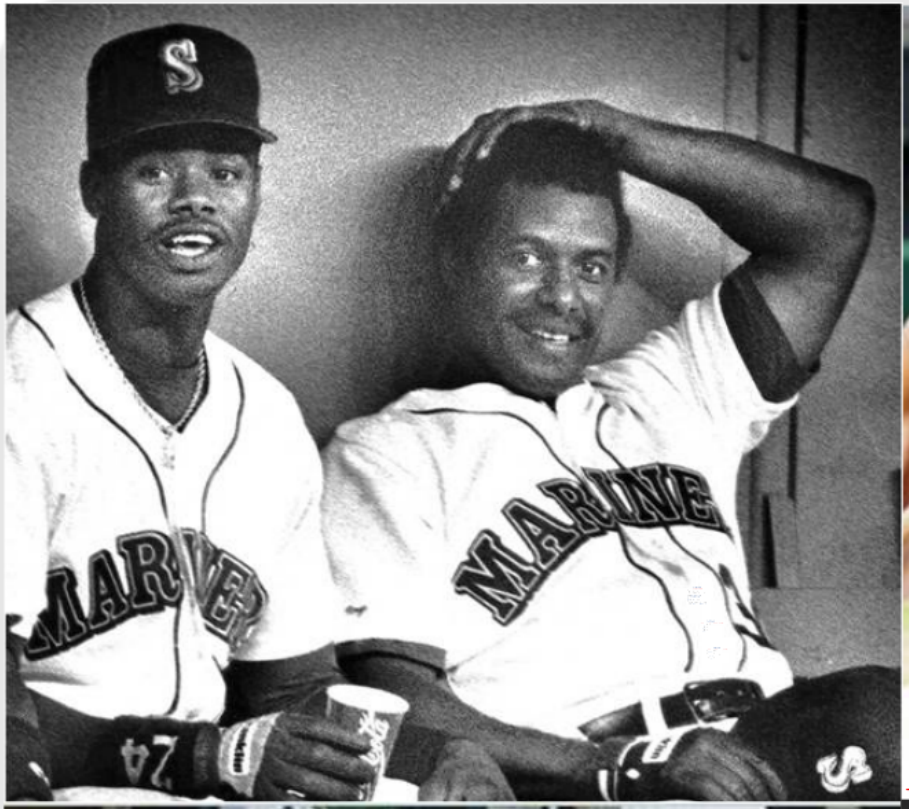
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