Not always a disadvantage: No relative age effect in the birth dates of elite junior ice hockey forwards

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INTRODUCTION

The relative age effect (RAE) refers to the higher representation of players born early in the year on youth and professional sporting teams (Cobley, Baker, Wattie, & McKenna, 2009).

Although the RAE is a well-established phenomenon, recent research has pointed to violations of the RAE amongst senior performers at the pinnacle of their sport (e.g., Ashworth & Heyndels, 2007; Ford & Williams, 2011).

Such violations are proposed to be due to peer effects: the increased challenge overcome by relatively late born players during their development, resulting in the acquisition of superior skill levels, which eventually translate into higher achievement (Ashworth & Heyndels, 2007).

PROJECT AIM

The present research sought to identify the age at which peer effects appear in elite junior populations.

METHODS

Participants

Procedure

Participant birth dates were collected from team rosters available on the official website of the International Ice Hockey Federation (http://www.iihf.com/iihf-home/home.html). Full details of first round draft players were obtained from the NHL website (www.nhl.com). An elite sample consisted of players nominated to award teams, or the top six draft picks by position, while the remaining players at the tournament/in the first round draft constituted the general sample.

Data Analysis

For each playing position and each sample, chi squared goodness of fit tests were used to examine the frequency of players born in each quarter.

RESULTS

Table 1
Number of U20 tournament players born in each quarter of the year by position and skill level (p < 0.05; ¯ no statistics calculated)*

Position	Sample	Quarter of Birth			
		First	Second	Third	Fourth
Goalkeeper	General*	72 (29.9%)	71 (29.5%)	57 (23.7%)	41 (17%)
	Elite¯	8 (32%)	6 (24%)	9 (36%)	2 (8%)
Defender	General*	305 (37%)	244 (29.6%)	167 (20.3%)	108 (13.1%)
	Elite*	20 (41.7%)	12 (25%)	9 (18.8%)	7 (14.6%)
Forward	General*	523 (37.4%)	390 (27.9%)	278 (19.9%)	208 (14.9%)
	Elite	**16 (23.5%)**	**22 (32.4%)**	**19 (27.9%)**	**11 (16.2%)**

Table 2
Number of U18 tournament players born in each quarter of the year by position and skill level (p < 0.05; ¯ no statistics calculated)*

Position	Sample	Quarter of Birth			
		First	Second	Third	Fourth
Goalkeeper	General*	85 (35.3%)	66 (27.4%)	58 (24.1%)	32 (13.3%)
	Elite¯	7 (31.8%)	8 (36.4%)	6 (27.3%)	1 (4.5%)
Defender	General*	326 (39.1%)	260 (31.2%)	144 (17.3%)	103 (12.4%)
	Elite*	20 (48.8%)	8 (19.5%)	5 (12.2%)	8 (19.5%)
Forward	General*	601 (41.4%)	398 (27.4%)	285 (19.6%)	167 (11.5%)
	Elite*	26 (45.6%)	16 (28.1%)	6 (10.5%)	9 (15.8%)

Draft Population

No RAE was evident in the elite population of first pick forwards (N = 64; figure 1). An RAE was evident in all other populations.
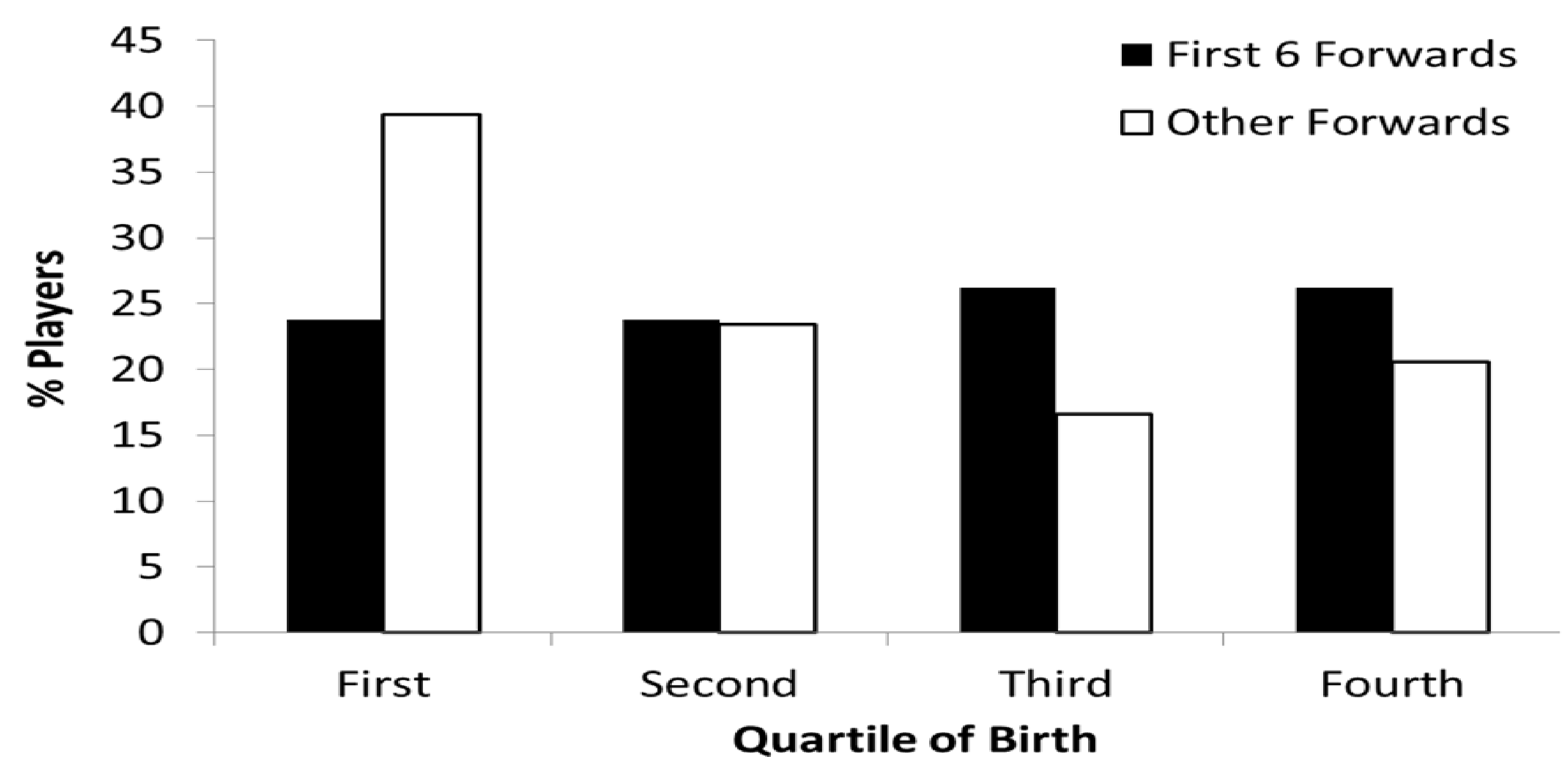

Figure 1. Percentage of forward players born in each quarter of the year for top 6 draft picks and for other first round forward players.

DISCUSSION

While robust RAEs were evident in the general populations studied, elite junior samples demonstrated a consistent violation of the RAE for forward players. While the emphasis in explaining peer effects has focused on advances in technical and/or tactical development, explanations which include physical conditioning, self-regulatory skills or psychological development should not be ruled out.

CONCLUSION

Peer effects appear to emerge for elite ice hockey forwards at the U20 level.

Future research should focus on this population to identify the source of peer effects.

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