What does it take to make the team ? Analyzing the talent identification process in competitive ice hockey

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INTRODUCTION:
In ice hockey, off-season evaluation camps are crucial steps in the preparation and training of national teams. Traditionally, such camps allow for a look at the evolution of different components of athletic talent such as 1) physical fitness, 2) technical skills, 3) psychological aspects and 4) performance in a game context. However, little is known about the real contribution of these camps in the team selection process. The objective of this study is to take a look at a talent identification process by analyzing the contribution of each talent determinant in competitive hockey.
METHODS:
A 2-yr prospective design was conducted among two cohorts of highly competitive adolescent players (initial n = 160, 50 % male, 14 years old; 50% female, 16 years old) based in the province of Quebec (Canada). Players were informed about the process and accepted to participate in the project. The selection process was developed over a series of three evaluation camps (Camp 1: 80 male-100 females; Camp 2: 45 males-45 females; Camp 3: n = 25 males-25 females). At each camp, measures included off-ice fitness tests, on-ice skating tests, psychological measures and game performance throughout the full hockey season. All data was used in the team selection process, which was based on two-phases (Phase 1: from 2 x 80 to 2 x 45 players; Phase 2: from 2 x 45 to 2 x 20 players), which led to two team selections. Descriptive statistics, and discriminant analyses (selected versus non-selected players at each phase) were performed. The selection process according to each variable was compared according to each team (gender).
RESULTS:
In phase 1, descriptive statistics revealed no differences were comparing males in which selected players were similar to non-selected. Results from discriminant analyses also showed no discriminant function for male players. For females, selected players displayed higher off-ice fitness, on-ice agility and psychological characteristics. Nine performance markers were significantly discriminant, in favour of selected players. By integrating additional variables at Camps 2 and 3, Phase 2 analyses led to a deeper understanding of the selection process for both teams. In fact, some psychological characteristics and game performance indicators (2022-2023) were identified as discriminant variables to be retain in the selection process.
CONCLUSION:
This study contributed to refine our understanding of talent identification in youth sport. Talent identification is a long-term process in which coaches and stakeholders need to consider the developmental aspects that contribute to attain high performance level in ice hockey. In this regard, evaluation camps should consider to assess the multiple components of sport talent. In addition, they should take account of players evolution in regard to these components. Further research is needed in terms of how the talent at this stage of development can be transposed for the next competition levels.

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