Comparison of the determining factors in adopting the Long-Term Athlete Development (LTAD) model for Canadian athletes among coaches from various sport disciplines

Summary of the project
The purpose of this investigation is to determine the process for the adoption and implementation of the Long-Term Athlete Development (LTAD) model by coaches of various sports: soccer (n=116), ice hockey (n=43), figure skating (n=49), gymnastics (n=50) and cross-country skiing (n=36). A large majority of coaches from all the disciplines believe in the benefits and effectiveness of the LTAD in improving their athletes’ performance. However, there are significant and consistent differences among the disciplines in the perceived knowledge and ability to apply the LTAD principles. These differences may be due to (1) the type of disciplines that already encourage late vs. early development by their very nature, (2) how consistent the LTAD is with the knowledge in each of the sports, and (3) the moment when the sport federation developed and disseminated its own LTAD model.

Research methods
We carried out the investigation using an online questionnaire with Canadian sports coaches (n=574). We analyzed the questionnaire based on the sport disciplines that had at least 50 respondents (i.e., ice hockey, soccer, cross-country skiing, gymnastics and figure skating). To fully understand the process for adopting and implementing the LTAD, we referred to the diffusion of innovation theory (Rogers, 2003) to develop the questionnaire.

Research results
At the time that the investigation was carried out (2012-2013), cross-country skiing coaches had the highest perceived knowledge of the LTAD (fair to good, 61.1%), whereas for figure skating coaches and gymnastics coaches this percentage was 18.4% and 10%. The beliefs in the anticipated benefits and effectiveness of the LTAD were very high among coaches in all the sports studied. Coaches for soccer, figure skating, ice hockey, cross-country skiing and gymnastics expected fairly high to high benefits and effectiveness from the LTAD in the following respective percentages: 90.9%, 68.9%, 88.9%, 86.9% and 71.5%. The perceived ability to apply the LTAD principles follows the same pattern; it was the highest among cross-country skiing coaches (69.5%, fair to good), and 56.2% and 50% for soccer and ice hockey coaches respectively. However, for gymnastics and figure skating coaches only 30% and 26.6% felt they had the same ability to apply the LTAD principles in their coaching. In the same way, only 4.3% of cross-country skiing coaches believed that implementing the LTAD was fairly complex or complex in their discipline, compared to more than 20% for coaches in all the other disciplines studied. Some organizational constraints were identified by the coaches but no significant difference was noted between the various sports.

It is interesting to note that the large majority of coaches from all disciplines believed in the benefits and effectiveness of the LTAD to improve the performance of their athletes. However, the perceived knowledge and ability to apply LTAD principles show significant and consistent differences among the disciplines. The complexity of implementing the LTAD is also perceived differently depending on the sport. These differences...
may be attributed to various factors, namely (1) the type of disciplines that already encourage late vs. early development by their very nature, (2) how consistent the LTAD is with the knowledge in each of the sports, and (3) the moment when the federation developed and disseminated its own LTAD model. In the latter case, coaches of some sports may have been exposed to the LTAD earlier.

Policy implications
Research may help in the process of adopting and implementing the LTAD and other initiatives with coaches at the level of federations as well as in the relevant departments of the various levels of government.

Next steps
Our research is not able to explain the differences observed among the sports. A qualitative approach could help complete the questionnaire-based study by identifying the reasons for these differences among the coaches of the sports studied.

Key stakeholders and benefits
- Provincial and federal sport federations
- Sport Canada