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Same, same or different? Analysis of complex sport profiles in basketball, rowing and tennis.

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INTRODUCTION:
What are the similarities between the various sports disciplines? And where do they differ more specifically? Within an international project aiming to determine similarities and differences between sports, highly qualified coaches were surveyed. The questionnaire aims to draw up sport profiles and for this purpose the Differentiated Model of Giftedness and Talent [1] was used as a guide. The research question is twofold and focuses on the differences between the three sports on the one hand, and on the other hand whether there are differences in required skills/abilities of youth athletes to develop successfully and characteristics of elite athletes.
METHODS:
Using the online survey "I need 2.0" (based on "I need 1.0" and Flemish Sports Compass [2,3]) via Qualtrics XM, highly qualified coaches (A-License, Diploma, International License) rated 88 total items within 8 categories. They were asked either how important each item is for youth athletes to successfully develop towards a potential elite senior level athlete (Y) or for elite athletes to successfully perform at international level (E).
In total 127 complete surveys (44 basketball (Y: 30, E: 14), 55 rowing (Y: 25, E: 30) and 28 tennis (Y: 17, E: 11)) were collected. Data were analyzed using a MANOVA with the two factors sports and context (Y) or (E) in SPSS 23 for each category.
RESULTS:
The results show that the three sports differ within each category ($p < .05$; Partial η^2 .371 - .891). Regarding the factor context, profiles for „youth" and „elite" only differ within the two categories anthropometrics and physical condition ($p < 0.05$ and Partial η^2 .151 - .154). There is a significant interaction effect sports*context within the category intellectual abilities ($p < 0.05$; Partial η^2.098).
CONCLUSION:
The analyses show that the profiles of the three sports show differences and similarities. The results of the tests of the between-subjects effects and the post-hoc-tests are logical in terms of content and prove the face validity of the sport profiles. The three sports represent different sport families, in the next step of the project, comparisons of sports within a sport family will be made.
The identified differences between youth and elite for physical condition may be due to the high trainability of the characteristics. The fact that, except for anthropometry, there are no differences between the profiles in all other categories may also mean that the sensitivity of the method is not high enough for this question. The results are only a partial result of an extensive analysis of the sport profiles, further analyses will follow. Clarifying differences and specificities of sports can help practitioners to give sport orientations. Similarities could be the starting point to design a broad and versatile development of junior athletes and eventually a tool for talent transfer programs.

1. Gagné (2003) 2. Pion et al. (2020) 3. Teunissen et al. (2021)

Topic: Training and Testing

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