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Talent development environments in Norwegian age-specific national teams in handball and ice hockey

Mehus, I., Aspvik, N.P., Sæther, S.A.

Norwegian University of Science and Technology

INTRODUCTION: The Talent Development Environment Questionnaire (TDEQ-5) (1), has been used in the Norwegian context to investigate the TDE of male players in soccer academies (2). However, the Norwegian version of the TDEQ-5 has not been tested for factorial validity. Furthermore, to the best of our knowledge, no previous studies have compared how female and male athletes experience their TDE across national teams in separate team sports. This study aims to test the Norwegian version of the TDEQ-5 through confirmatory factor analysis (CFA) for a five-factor structure, (a) long-term development focus (LTD), (b) communication (COM), (c) alignment of expectations (AOE), (d) holistic quality preparation (HQP), and (e) support network (SN). We also aim to compare how female and male athletes experience the TDE across different team sports. METHODS: Athletes of age-specific national teams (N=216, 42.59% female), between ages of 15-18 (M=16.28, SD=.88), from handball (44.91%) and ice hockey (55.09%) were included in this study. Questionnaires were administered by hand on location of national team gatherings.

RESULTS: The initial model of the CFA met most of the thresholds of the fit indices; X2(265)=479.99 (p<.001). X2/df(1.8), RMSEA=.06.05-.07, SRMR=.06. However, the CFI (.87) and the TLI (.86) were slightly below the acceptable reference value. Checking the modification indices suggested to add two covariate links between SN1 and SN4, and between AOE1 and LTD4. This improved the model fit; X2(263)=437.38 (p<.001), X2/df(1.7) RMSEA=.06 .05-.07, SRMR=.06, and CFI=.90. Leaving only TLI (.88) slightly off the reference value. Cronbach's alpha was calculated to test scale reliability; LTD (a=.76), AOE (a=.64), COM (a=.84), HQP (a=.80), SN (a=.66). To test for sport- and gender differences a series of two-way ANOVAs were performed. For LTD handball scored higher (p<.05). For AOE there were no significant differences between sports or gender. For COM men scored higher (p<.01). For HQP handball scored higher (p<.01). For SN there were gender- and sport differences, in addition to an interaction effect. Men scored higher compared to women (p<.01), handball scored higher compared to ice hockey (p<.05), and the interaction effect implied a larger difference between male and female athletes in ice hockey compared to handball (p<.05).

CONCLUSION: The Norwegian version of the TDEQ-5 appears to be an applicable tool for research and can be used to compare the TDE across gender and different team sports on a high level of competition. **REFERENCES:**

1. Li, et al., (2015). Journal of Sports Sciences

2. Gangsø, et al. (2021) International Journal of Environmental Research and Public Health

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