DISCRIMINATIVE VARIABLES BETWEEN TOP4 AND LOWER RANKING TEAMS IN SEMI-PROFESSIONAL HANDBALL LEAGUE OVER THREE SEASONS

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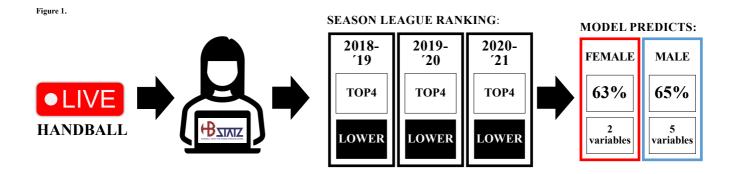
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INTRODUCTION:
Performance level indicators at the elite international level for males have recently been identified. Discriminative game related statistics variables for winning include 9-m efficiency, wing efficiency, blocked shots, 7-m goalkeeper efficiency and 2-min suspensions. Additionally, successful teams had taller players and more international playing experience compared to less successful teams (Almeida et al., 2020). For elite females, stolen balls have been identified as defensively important along with shot efficiency, attack efficiency and a lower number of technical faults for success in international tournaments (de Paula et al., 2020). Recently, whole season statistics for both sexes have been analyzed both in terms of full matches (Þorgeirsson et al., 2022b) and the final 10 minutes of balanced matches (Þorgeirsson et al., 2022a). One of the gaps that remain is which variables discriminate between high quality teams (1st to 4th in league) compared to the lower ranking teams (5th-12th in males and 5th to for 8th females).

AIM: a) To analyze the discriminative variables of the top four (TOP4) teams in the Icelandic semi-professional league across three consecutive seasons (2018-'19, '19-'20, '20-'21) and compare to the lower finishing positions (league of 12 teams for males and eight for females).

METHODS: The game-related statistics from 384 male and 213 female matches were analyzed with a discriminant analysis using a stepwise method. The dependent variable was the final league ranking position set as TOP4 (1st-4th place) compared to lower ranking teams (5th to 12th for male, and 5th to 8th in females). The analysis included 23 independent variables for offense and defense.

Figure 1.

RESULTS: A discriminative model for male teams was produced and able to classify the TOP4 teams correctly in 64.7% of cases using five variables. The variables discriminating were more assists, fewer technical fouls, more two minutes suspensions, better goalkeeping save efficiency, and better wing player scoring efficiency (Wilks lambda 0.890 and CCI 0.332). Likewise, a female model was produced and included only two variables in the final step: fewer technical fouls and more blocked shots resulting in 63,1% of cases correctly classified (Wilks lambda 0.887 and CCI 0.336).

CONCLUSION: Results for males are more mixed with offensive and defense variables included. The assist variable might indicate the TOP4 teams' ability to create high-scoring chances with a critical pass on offense while keeping technical fouls to a minimum. Coaches could benefit from systematically analyzing situations where their team loses the ball due to technical faults to enhance tactical situational efficiency.

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