Is game-related statistics of winners different from the rest in semi-professional male handball league?

Borgeirsson, S.1,2, Sigurgeirsson, Ó. 3, Sekulic, D.2, Saavedra, J.1

1Physical Activity, Physical Education, Sport and Health Research Centre, Sports Science Department, School of Social Sciences, Reykjavik University, Reykjavik, Iceland, 2Faculty of Kinesiology, University of Split, Split, Croatia, 3HBStatz Company, Reykjavik, Iceland.

ABSTRACT: Background and objectives. Unique data presents opportunities to explore if differences exist between the reigning national champions (two successive years) and all the other lower-ranking teams in a regular season. The distinctive and successful style of play the team has adopted, characterized by breaking fast against opponents at seemingly every chance, drives this inquiry. Handball at an elite level is changing as offensive finalizations have become more efficient from 9m and the wings, while more shots are blocked in defense (Almeida et al., 2020). Previously, differences in game-related statistics identified in the domestic league are total shot efficiency, goalkeeper saves efficiency, and 9 m shots efficiency (Borgeirsson et al., 2022). The objectives are twofold: to analyze offensive variables differences in terms of efficiency (%) in offense and goalkeeper and in parallel, to analyze differences in the number (#) of successful offensive and defensive events. Methods. The analysis included two hundred sixty-four games in total from two seasons of top male league handball. The differences in game-related statistics between the national champions (44 games) and the other teams were compared by parametric (independent samples t-test) or non-parametric (Mann-Whitney U test) test depending on whether the respective variable met normality. Results. Differences in efficiency were observed in four variables where the champions performed better than the others, namely total shots \( (d = 0.43) \), wing shots \( (d = 0.34) \), right-wing shots \( (d = 0.49) \), and goalkeeper’s saves made \( (d = 0.32) \) all with small effect sizes \( (d < 0.5) \). Differences in the number of events were found for 14 variables, of which wing goals had a large effect size \( (d = 0.80) \) while center back goals \( (d = 0.58) \), assists \( (d = 0.47) \) and exclusions \( (d = 0.54) \) had moderate effect sizes and the rest small effect sizes \( (d < 0.5) \). Discussion. The national champions were more efficient than the average other teams in offense, especially from the right wing. Their wing players scored more, made more assists, and had more exclusions than other teams but scored fewer goals on average from center back than the other teams. Surprisingly, neither fast break efficiency nor the number of fast break goals emerged as significantly different from the average. It might indicate that the nature of the outcome data does not capture their playing style or that the general assumptions of the team's fast breaking style are skewed. Conclusion. We conclude that further investigation into the champions style of play is warranted, although the observed characteristics of the team does not translate into significant differences from the other teams for fast break conversion or number of goals. Their high efficiency from the wings is in line with the development at elite level (Almeida et al., 2020). We suggest that an analysis with more advanced computerized methods, taking advantage of the time-series nature of the data already available to gain an understanding of the processes behind their successful performance in their previous two seasons.

KEY WORDS performance analysis, team handball, goalkeeper, wing players, efficiency

Reference: