

Decision and reasoning expertise in top-class handball referees

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Introduction

Surprisingly little is known about referees' decision-making (RDM) expertise. Most studies compared experts with novices, who constitute the opposite sides of the expertise continuum. Already Abernethy, Thomas und Thomas (1993) advocated that comparisons between experts and near-expert groups should be conducted to advance expertise research. Therefore, here we sought to compare three groups of referees at the highest level of officiating. We hypothesized that RDM correctness improves with increasing level of refereeing expertise.

Method

A total of $n = 36$ elite (ER), $n = 50$ advanced (AR) and $n = 48$ intermediate (IR, from regional federations) handball referees participated in the study. Referees conducted a video-based decision-making test under rest. They watched 25 four second videos, each showing either a foul or no foul. Upon the end of a video, referees first chose whether a foul or no foul (decision) occurred and, if choosing a foul, they next assigned the type of foul and punishment (reasoning).

Results

One-factorial ANOVAs revealed a significant effect for expertise in *decisions*, $F(2, 131) = 7.12$, $p = .001$, $\eta_p^2 = .10$, 90% CI [.03, .18], and *reasonings*, $F(2, 131) = 8.10$, $p < .001$, $\eta_p^2 = .11$, 90% CI [.03, .19]. Planned contrasts showed that, for decisions, ER outperformed AR, whereas AR and IR did not statistically differ. For reasonings, ER and AR performed similarly while AR outperformed IR.

Discussion

Overall, the hypothesized expertise effect was partly confirmed. For decisions, differences between ER and both other groups were found, while for reasonings this could only be seen between IR and the two higher elite levels. The mechanisms behind these varying differences need further investigation as proposed by the expert performance approach (Williams & Ericsson, 2005). Additionally, as the classification of the top-class handball referees corresponds to the expertise levels in athletes, this classification may need more refinement in upcoming studies (e.g. see the FTEM framework by MacMahon et al., 2014).

References

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