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Are the playoffs different from the regular season? A comparison of in-game statistics in Icelandic elite handball

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ABSTRACT

There are many axioms in sport that are taken at face value. One of them is that the playoffs are somehow totally different from the regular season. The aim of this study was to test that axiom by comparing in-game statistics during the regular season and the playoffs in the semi-professional Icelandic elite men's handball league. Data from 724 games (648 regular season games and 76 playoff games; 1448 data points) across five seasons were analysed using a two-level logistic regression analysis. The variables of interest were pace, fast breaks, legal stops, penalty throws given, 2-minute suspensions, and saves. The results indicated no meaningful differences in fast breaks, penalty throws given or number of saves, but did find signs of added intensity during the playoffs with a higher pace, more legal stops and more 2-minute suspensions. While the differences were not particularly large, they have the possibility of being practically meaningful and were in line with the axiom. Possible explanations were discussed but more research is needed to determine whether these findings are context- or sport-specific.

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KEYWORDS

Fast breaks; fouls; match analysis; pace; postseason; 2-minute suspensions

1. Introduction

Many sports leagues bifurcate at the playoffs, which are often referred to as the business end of the season. That is where the teams with the best records play each other in a knockout tournament for a shot at the title, while the remaining teams take an early brake. The playoffs are often purported to be a more intense affair than the regular season, where everything is on the line and every duel is contested even more fiercely.

Various structural differences exist between the regular season and the playoffs, such as more homogeneous skill levels and multiple games against the same opponents which may alter the teams' tactical approach (Garcia et al., 2013). But there are also game-specific mechanisms that appear to distinguish the playoffs from the regular season (Feroli et al., 2021; Garcia et al., 2013; Mandić et al., 2019; Teramoto & Cross, 2010). As previous research on basketball and soccer has shown, the pace of the games tends to slow down and the defensive effort increases during the playoffs (Garcia et al., 2013;

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Mandić et al., 2019; Sampaio & Janeira, 2002; Sampaio 2003, as cited in Sampaio & Janeira, 2003, pp. 46–47; Teramoto & Cross, 2010; Wells et al., 2015). To optimise performance and maximise the likelihood of victory, coaches in basketball and soccer have been found to decrease training intensity and give increased playing time to the more experienced players on the roster (Ferioli et al., 2021; Mandić et al., 2019; Wells et al., 2015).

These differences do not appear to be universal, as Mandić et al. (2019) found when comparing the National Basketball Association (NBA) and the Euroleague. While there were only minor differences between game characteristics during the regular season and playoffs in the Euroleague, a significant shift was observed in the NBA. Compared to regular season games, NBA playoff games were characterised by a more cautious and tactical approach (Mandić et al., 2019), while the Euroleague playoffs were characterised by added defensive intensity. Whether the aforementioned trends are context specific, cultural, or incidental is uncertain, but more research on the phenomena is certainly warranted.

As the sport of handball shares many of the same structural principles as basketball, it would be reasonable to assume that some of these trends may apply to handball as well. The aim of this study was therefore to test whether there are any differences between in-game statistics during the regular season and the playoffs in handball by analysing five seasons from the Icelandic elite male handball league.

When determining which in-game statistical categories to include in the comparison, constructs that can be defined as game characteristics were prioritised. These were constructs that can be influenced by tactical decisions as opposed to those overly influenced by individual players or individual performances (i.e. pace, fast breaks, legal stops, penalty throws given, 2-minute suspensions, and saves). An effort was made to include categories related to offence, defence, and goalkeeping. Game venue and team quality were also of interest as they have previously been found to effect game proceedings in handball (Oliveira et al., 2012).

2. Methods

2.1. Data and procedure

Every game in the semi-professional elite men's division in Iceland since 2017 has been compiled by the sports analytics company HB Statz, who are the official statistics partner of the Icelandic Handball Association. Data from all 724 games (648 regular season games and 76 playoff games; 1448 data points; a sample size that is in line with the recommendations for nested data [i.e. Arend & Schäfer, 2019]) during the 2017–2022 seasons were gathered in situ by designated representatives from the home teams. All compilers had received training from HB Statz before using the system; a process which has previously been found to be both reliable and effective (González-García et al., 2016).

While there are several actions in the HB Statz software that require subjective interpretations of the proceedings (e.g. assists and chances created), the actions that were utilised in this study are straight forward objectively countable entities. However, there is always the risk of missing or misregistering an action, and some categories that are deemed low value may not be compiled as diligently as the more important ones.

In an effort to reduce discrepancies and increase the reliability of the collected data, a data quality process that cross-references the HBStatz reports with the official game report is utilised. A logical test is also performed on all games to make sure that the report balances out (e.g. number of penalty throws given = goals from penalty throws + missed penalty throws). Games that are flagged during the cross-referencing or the logical test are reviewed, and recompiled if needed. Additional quality controls are done at random in real time by representatives from HBStatz.

The following variables were of interest and were included in the study: 1) pace (the number of possessions during the game [shots + turnovers – offensive rebounds]), 2) the number of fast breaks (quick transitions from defence to offence that leads to uncontested shots), 3) legal stops (any time a defending player stops an opposing player resulting in the referee signalling a free-throw, without the defensive player being penalised or the offensive player receiving a penalty throw), 4) penalty throws given (uncontested shots from the penalty line given when a foul robs the opposing team of a clear goalscoring opportunity), 5) 2-minute suspensions (when the offending team has to play at a numerical disadvantage for two minutes due to a rule violation), 6) saves (the number of shots saved by the goalkeepers), 7) game venue (whether the game was played at home or away), and 8) team quality (measured using the average point total of the teams during the five-year period [i.e. higher score indicates higher quality]).

2.2. Data analyses

Means (M) and Standard Deviations (SD) were calculated for all dependent variables. The correlation between those variables was assessed in JASP (Version 0.16.1) using Bayesian Pearson Correlation Analysis (cut-off values for Bayes factors: <1 = no evidence, $1-10$ = anecdotal to moderate evidence, >10 = strong to extreme evidence [Lee & Wagenmakers, 2014]). To test if the game variables (i.e. pace, number of fast breaks, legal stops, penalty throws given, 2-minute suspensions, saves) were associated with game type (regular season vs playoff) a two-level logistic regression analysis was performed in Mplus 8.4. The teams' individual values from each game were specified on the first level of the model, and nested within games (on the second level). All game variables were included as co-variates on level 2. Team quality was included as a co-variate on level 1. This structure allowed for the inclusion of team quality in the model while also addressing the dependency of related datapoints. The analysis was performed using the Bayesian estimator (for comparison between this estimation and the more traditional frequentist estimation see [Stenling et al., 2015]). The Markov Chain Monte Carlo simulation procedures with a Gibbs sampler was used, and 100,000 iterations with a potential scale reduction factor around 1 as an indicator of convergence were performed (Kaplan & Depaoli, 2012). Posterior predictive p (PP p) value and its accompanying 95% confidence interval were used to evaluate model fit. In Mplus "A positive lower limit is in line with a low posterior predictive p value and indicates poor fit" (Muthén & Asparouhov, 2012, p. 315). Credibility intervals (CI) were estimated for all parameters within the models. A 95% CI that did not include zero was considered to indicate a credible effect (Zyphur & Oswald, 2015).

Table 1. Mean, standard deviation and Bayesian correlations for the dependent variables.

Variable	<i>M (SD)</i>				1	2	3	4	5
	Total	Regular season	Playoffs						
1. Pace	55.05 (4.89)	54.92 (4.83)	56.17 (5.27)		-				
2. Fast breaks	4.15 (2.57)	4.08 (2.53)	4.66 (2.85)		.336**	-			
3. Legal stops	19.04 (6.14)	18.78 (6.03)	21.19 (6.63)		-.123**	.074	-		
4. Penalty throws given	3.43 (1.86)	3.42 (1.85)	3.48 (1.97)		.045	-.018	.068	-	
5. 2-minute suspensions	3.73 (1.75)	3.67 (1.72)	4.22 (1.93)		-.018	.023	.015	.186**	-
6. Saves	12.25 (3.63)	12.21 (3.64)	12.57 (3.52)		.166**	.164**	.011	.006	.005

* anecdotal – moderate evidence, ** strong – extreme evidence.

3. Results

Descriptive statistics for the dependent variables can be seen in Table 1. Most of the variables had weak correlations or no evidence for the alternative hypotheses. A notable exception was the moderate positive correlation between pace and number of fast breaks ($r = .336$).

The 2-level logistic regression model showed good fit to data ($PPp = 0.54$, 95% Confidence Interval = -32.81 , 31.90). Team quality had credible associations with fast breaks ($\beta = .20$, 95% CI = $.15$, $.25$), legal stops ($\beta = .14$, 95% CI = $.09$, $.19$), 2-minute suspensions ($\beta = .09$, 95% CI = $.03$, $.15$), and saves ($\beta = .14$, 95% CI = $.08$, $.19$).

On level two pace ($\beta = .09$, 95% CI = $.01$, $.17$), legal stops ($\beta = .27$, 95% CI = $.14$, $.60$) and 2-minute suspensions ($\beta = .18$, 95% CI = $.05$, $.32$) were associated with type of game. More specifically, there was increased probability of a higher pace, more legal stops, and more 2-minutes suspensions during playoff games compared to regular games. No other credible associations were discovered for the other variables.

4. Discussion

This study set out to examine whether there were any differences between the regular season and the playoffs in the Icelandic elite division. The results indicated an overall added intensity during the playoffs with a higher pace, more legal stops and more 2-minute suspensions. While the differences were not particularly large, any differences at the elite level are likely to be practically meaningful (Gabbett et al., 2017; Prentice & Miller, 2016). As the current study appears to be the first of its kind within elite handball, the findings were discussed using similar studies on other sports.

The added defensive intensity was in line with the findings of several studies that found indications of greater defensive efforts during the playoffs in various basketball leagues (Garcia et al., 2013; Mandić et al., 2019; Teramoto & Cross, 2010). The increased defensive efforts would likely lead to more offensive errors and low-quality shots, leading to more frequent ball exchanges.

Contrastingly, the findings in this study run counter to the results of previous studies that found the pace of games to decrease during the playoffs compared to the regular season in basketball (Garcia et al., 2013; Mandić et al., 2019; Sampaio & Janeira, 2002; Sampaio, 2001, as cited in Sampaio & Janeira, 2003, pp. 46–47). The exception being the Euroleague where the pace remained constant (Mandić et al., 2019). The proposed explanation for those results being that a higher pace could lead to more errors, which

could in turn compromise the game result. These differences in game characteristics seemed to be related to tactical adjustments intended to optimise both offensive- (e.g. adjusted shooting strategy) and defensive strategies (e.g. increased defensive intensity; Mandić et al., 2019; Sampaio & Janeira, 2003; Teramoto & Cross, 2010). It is unclear whether this discrepancy is context or sport specific.

Another possible reason for these somewhat divergent findings may be the varying stakes of regular season games across different leagues. In some leagues, the regular season is of little consequence, and its main purpose is to rank the teams for the playoffs (e.g. the NBA). The sole advantages of having the best record during the regular season being a supposedly easier route to the final and home court advantage. Contrastingly, other leagues reward the winners of both the regular season and the playoffs (e.g. Icelandic handball league).

The number of games may also be a possible factor as they vary across leagues. Pitts (2016) found little evidence of any difference between the regular season and the playoffs in the National Football League (NFL) where the number of games during the regular season is small, and every game is of significant consequence. Conserving energy or experimenting during a regular season with relatively few games could therefore reduce the teams' chances of getting to the playoffs.

Various handball leagues are often characterised by certain historical- or cultural traditions, such as the German Bundesliga being known for being high paced, physical, and direct, while the Balkan leagues are known for slow paced, but explosive and technically brilliant handball. The Icelandic handball tradition is dominated by tactics, and boasts an environment that fosters skilled coaches who produce technically and tactically adept players (Sigurbjörnsson, 2018, 2022). The tactically dominant culture in Icelandic handball may therefore offer little room for tactical improvements from the regular season to the playoffs. As a result, upping the intensity may be the most effective way to meet the higher stakes of the playoffs.

The results of this study should be viewed in light of its strengths and limitations. One of the clear strengths is the robustness of the data which has undergone several reliability procedures and spans five competitive seasons. The data are also publicly available and can be accessed on www.hbstatz.is and www.hsi.is by anyone interested in verifying or reproducing the results.

Because of the competition format in the Icelandic elite division, the number of regular season games far outnumber the number of playoff games. This was accentuated by the cancellation of the playoffs during the 2019/2020 season due to the Covid-19 pandemic. While the chosen variables were deemed to give a varied and nuanced understanding of the game characteristics, there is always the possibility that other variables of interest would shed new light on possible distinctions between the regular season and the playoffs.

Future research should explore whether these findings are specific to Icelandic handball, or technical- and tactical leagues in general, as gameplay in other sports has been found to somewhat context-specific (e.g. Jorgensen et al., 2021; Mandić et al., 2019). Repeating this study in a more physical league such as the German Bundesliga or the Norwegian Eliteserien would therefore be of great interest. Accounting for intra-game variability as opposed to merely studying inter-game variability may also highlight new or interesting dynamics.

5. Conclusion

There do appear to be some differences between the regular season and the playoffs in Icelandic elite handball. While there are definite indications of increased intensity during the playoffs, with a higher pace, more legal stops and more 2-minute suspensions, it is uncertain how meaningful the differences are in practice.

Disclosure statement

No potential conflict of interest was reported by the author(s).

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Data availability statement

Data is openly available at <https://doi.org/10.1080/24748668.2022.2115781> and <https://doi.org/10.1080/24748668.2022.2115781>.

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