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CHARACTERIZATION OF THE "FAST THROW-OFF AFTER GOAL" IN THE EUROPEAN MEN'S CHAMPIONSHIP 2018

Caracterización del "contragol" en el campeonato europeo de masculino 2018

Aldina Sofia Silva [1, 2] * iD, Gabriel Augusto B. Maroja [2] iD, José António Silva [2] iD

1 Escola Superior de Educação de Fafe, Portugal
2 Centro de Investigação, Formação, Inovação e Intervenção em Desporto (CIFI2D), Faculdade de Desporto da Universidade do Porto; Portugal.

* **Correspondencia:** aldinasofia@gmail.com

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Abstract

Objective: identify possible differences between winning and losing teams in the use of "fast execution of throw-off after a goal", depending on the moments of the game when it occurs, the way it ends, and the effectiveness obtained. **Methodology:** 44 games (2018 European Men Championship). **Results**: i) in numerical equality, winning teams use more often this strategy compared to the defeated teams and succeed to find solutions that allows them to finish closer to the goal; ii) in numerical superiority of 1 player, defeated teams choose this strategy more often; iii) in numerical inferiority both teams clearly choose not to use or use only in very specific cases this strategy; iv) when they are losing by more than 3 goals the winning teams use less times, this strategy; v) when tied, winning teams clearly use this strategy more often; vi) winning teams obtain more situations of shoot when using this tactical action, and the defeated teams finish these attack sequences more often in technical failures. **Conclusion**: the "Fast execution of throw-off after a goal" is a collective tactical action that can be use, as an indicator of the differentiation of the final result of the teams.

Keywords: winning teams; defeated teams; game analysis.

Resumen

Objetivo: identificar las posibles diferencias entre los equipos ganadores y los perdedores en el uso del "contragol", en función de los momentos del partido en que se presenta, la forma en que termina y la eficacia obtenida. **Metodología:** se analizaron 44 juegos, del Campeonato Europeo Masculino Senior-2018. **Resultados:** i) en igualdad numérica, los equipos ganadores utilizan con mayor frecuencia el "contragol" en comparación con los equipos derrotados y consiguen encontrar soluciones que les permitan finalizar más cerca del objetivo; ii) en las superioridades numéricas de 1 jugador, los equipos derrotados optan más por el "contragol", pero iii) en inferioridad, ambos equipos eligen claramente no utilizar, o utilizar esta estrategia en casos muy específicos; iv) cuando pierden por más de 3 goles, los equipos ganadores usan el "contragol" con menos frecuencia, pero cuando están empatados, los equipos ganadores claramente usan esta estrategia con más frecuencia en comparación con los equipos derrotados, v) los equipos derrotados logran obtener más situaciones de finalización en esta acción táctica, pero también terminan estas secuencias más a menudo con fallas técnicas. **Conclusión:** el "contragol" es una acción táctica colectiva que puede ser utilizada, como indicador de la diferenciación del resultado final de los equipos.
Palabras-clave: equipos ganadores; equipos derrotados; análisis del juego.

Introduction

Currently in sports science assessing the performance of the teams, play a crucial role for the coaches in the configuration of the players and teams' models plus consequently in the training plan and in the preparation of the competition (Bilge, 2012; Garganta, 2001).

In this context, the information that the coaches obtain from the observation and analysis of the games do not translate the reality of the game by itself, consequently the numbers need to be complemented with the knowledge of the coaches or researchers (Sampaio, 2003). The quantitative analysis is valid only if it is associated with the coaches' knowledge about the game, but the opposite is also true, there is no coach that without any quantitative analysis system to support his evaluation, is able to perform a reliable analysis of the game (Daza, Andrés, & Tarragó, 2017).

In order to overcome the difficulties inherent in the investigation of the game processes, it's important to develop a focused orientation for the study of sequences of the game, rather than what a pile of products (single data) can produce (Amatria, Maneiro-Dios, & Anguera, 2019; Garganta, 2007; Sampaio, Ibáñez & Lorenzo, 2013).

The current research trends in this area and the evolution that which is expected in game analysis, will allow the training to become much more valid and objective, once you know with a higher precision the weak points you can improve (Taborsky, 2007). This idea follows the search for reasons that lead one team to be more effective than another, that is, to score more goals than the opposite team during a game, which represents the pursued objective by all coaches and handball investigators.

In collective sports, the main indicator of team performance is usually the final result, that is, winning or losing (Hughes & Bartlett, 2002; O'Shaughnessy, 2006; Oliveira, Gómez, & Sampaio, 2013), and therefore, one of the most interesting problems to solve are the differences between the winning and defeated teams (Milanović, Vuleta, & Ohnjec, 2018), especially at the highest level. The analysis of the competition, as the World Championship, European, and the Olympic Games is mandatory for determining the evolutionary trends of the different sports.

This form of analysis helps to assess the success or failure of the participating teams, but mainly to determine the effectiveness of the processes in achieving positive results.

The interpretation of the handball game statistics has been studied under the differential performance of athletes and teams.

Realizing the capacity of the game indicators to establish differences between the best and worst teams and what their contribution can be to the victories and defeats in the competition, is a question that has been pursued by several researchers over the years. However, these systems of analysis do not seek to identify / predict individual or collective behaviors, but rather to characterize constant patterns of behavior, for what is common in good or bad performance. It should be noted that in team sports, particularly in handball, chance and the adaptability of a behavior are factors always present and that condition a game.

Still in this domain we must consider that the constant evolution of the game and the rules allows to perceive changes in these processes, that is, in the game models of the teams. Game analysis in handball arises from a series of organized and ball possession phases, and performance indicators may reflect the internal structure of that possession in different game sequences (Volossovitch & Gonçalves, 2003). And for example, the change to the rules in 2000, which allowed that in the throw off after conceded goal, it was not necessary that the opposite team was all in its midfield, provided changes from the tactical point of view, namely in the transition phase defense - attack. This change had the effect of increasing the rhythm of the game in terms of number of actions (goals, shoots, saves, technical failures), leading teams to start to take advantage of "quick throw-offs after a goal". Thus, this possibility only appeared after 2000 replacement rule and became another offensive game method for rapid transition defense - attack which the teams could choose (Miranda, 2016; Šibila, 2012). We can define fast throw-off as a collective action in which the team tries to shoot quickly after conceding a goal (Delgado, 2004).

This strategy seems to have assumed a very significant importance in the game models of the teams (Silva, 2008; Šibila, Bon, Uroš, & Pori, 2011), however, there are not many studies that characterize and/or demonstrate the efficacy of this indicator.

In the literature, we find three studies that show some conclusions regarding this indicator. Silva (2008) analyzed all 44 matches of the European Men's Senior Championships in Switzerland in 2006 and found that only 4% of the offensive sequences were made through fast throw-off after conceded goal. Similarly Silva (2011), found that in 29 matches (6 top-ranked), the teams that finished in the top 6 places of the 2009 Senior Men's World Championship in Croatia: (i) only finalized their attacks with fast throw-off after conceded goal in 3,5% of the times; (ii) only scored 3,5% of goals through this Offensive Game Method; and (iii) performed only 4,8% of the offensive sequences through fast throw-off after conceded goal. The percentage of offensive sequences through the fast throw-off after conceded goal, is lower in the most recent Championship comparatively to the oldest Championship.

Still Miranda (2016) in an analysis of 521 sequences that were obtained based on the observation of 44 matches, out of 47, performed at the European Men's Handball Championship in 2014, observed that the fast-throw off after concede goal, was used as offensive sequence in 6,4% of the time, or as a way to end the attack (4,9%); (ii) only 4,9% of the goals scored during the Championship were through the method of offensive game of rapid transition defense-attack of Throw off After Goal Conceded; and still (iii) about 40,9% of the offensive sequences when they made the Fast Throw off After Conceded Goal finished in shoot, 22,6% in suffered foul and 25,3% with the organization of the "system attack" by the team with ball possession.

Considering the context previously demonstrated the purpose of this study, it is not only to characterize and analyze the use of this offensive play method of the transition defense-attack, the "fast throw-off of the ball in game after conceded goal" but also to identify possible differences between winning and losing teams in the use of "fast execution of throw-off after a goal", depending on the moments of the game when it occurs, the way it ends, and the effectiveness obtained.

Metodology

Sample

In the present study, 44 games were considered from a total of 47 matches in the European Men's Championship of 2018. As the main objective of the work was to find differences between winning and defeated teams, 3 games that ended with a draw were eliminated from the sample.

All occurrences related to the different attacks performed by the teams were recorded and, as the purpose is to analyze the fast throw-off, only the sequences in which this method of offensive play was used were considered.

Methods

For the accomplishment of the work was used the observation instrument elaborated by Silva (2008). This mixed observation instrument of Field Format and Category System makes it possible to record the events based on two observation units of actions of each team, i) the attack, all events that take place since the team came into possession of the ball until losing it to the opponent; and ii) the offensive sequence, all the offensive conduits of a team that begin and / or end in stops of the flow of game or his contextual modifications (Silva, 2008, pp. 93).

Statistical procedures

After observing the games, a database was created in Excel, where the descriptive statistics procedures were performed to obtain the results: absolute and relative frequencies, averages and percentages.

Results

Characterization of Offensive Sequences and Attacks Through "Fast Throw-Off after Goal"

Results regarding the conceded goals by the winning and defeated teams (Table 1), as well as the number and percentage of "fast throw-offs" created from this situation, demonstrate that conceded least goals and opted less times to use the fast throw-off of the ball after goal comparatively the defeated teams.

Table 1 - Number of sequences and relative percentage of " fast throw after-goal" used, based on the number of goals conceded.

	Conceded Goals	"Fast throw-off" sequences	Percentage of goal conceded that gives "fast throw-off" (%)
Winning teams	1095	287	26,2
Defeated teams	1315	398	30,3

Context of the game in which the "fast throw-off" is used

The number of offensive sequences realize through the "fast throw-off after a goal" according to the numerical relation at each moment of the game (Table 2), reveals that, in the 7x7 the winning teams use this strategy more often. However, in numerical superiority winning teams opt more often for the "system attack" when compared to the defeated teams (6,3% *vs* 8,5%). Still when in numerical inferiority the winning teams also use this strategy less often then de defeated teams (1,0% vs 2,0 %).

Table 2 - Number of sequences and relative percentage of " fast throw after-goal" used, as a function of numerical ratio.

	Winning	%	Defeated	%	Total	TOTAL (%)
7X7	264	92,0	352	88,5	616	89,9
Inferiority 1 player	3	1,0	8	2,0	11	1,6
Superiority 1 player	18	6,3	34	8,5	52	7,6
Inferiority 2 players	0	0,0	0	0,0	0	0,0
Superiority 2 players	0	0,0	2	0,5	2	0,3
5X6	0	0,0	0	0,0	0	0,0
6X6	2	0,7	2	0,5	4	0,6
Total	287	100,0	398	100	685	100

The offensive sequences performed through the "fast throw-off" according to the score result (Table 3), allow us to realize that when they are losing by 3, 4 and 5 goals, winning teams, use the fast throw-off as strategy less often that the defeated teams. However, when they are tied or winning by 1 or more goals, the winning teams continue to use this strategy.

Table 3 - Number of sequences and relative percentage of " fast throw after-goal" used, depending on the score result.

	Partial result	Winning		Defeated		Total	
		(n)	(%)	(n)	(%)	(n)	(%)
	5M	1	0,3	0	0,0	1	0,1
	4M	3	1,0	0	0,0	3	0,4
	3M	13	4,5	0	0,0	13	1,9
	2M	9	3,1	12	3,0	21	3,1
	1M	39	13,6	18	4,5	57	8,3
	EP	57	19,9	37	9,3	94	13,7
	M1	50	17,4	63	15,8	113	16,5
	M2	27	9,4	61	15,3	88	12,8
	M3	20	7,0	36	9,0	56	8,2
	M4	18	6,3	53	13,3	71	10,4
	M5	11	3,8	40	10,1	51	7,4
	M6	13	4,5	33	8,3	46	6,7
	M7	12	4,2	21	5,3	33	4,8
	M8	9	3,1	13	3,3	22	3,2
	M9	3	1,0	5	1,3	8	1,2
Sequences by result	M10	1	0,3	4	1,0	5	0,7
	M11	0	0,0	0	0,0	0	0,0
	M12	0	0,0	0	0,0	0	0,0
	M13	1	0,3	1	0,3	2	0,3
	M14	0	0,0	0	0,0	0	0,0
	M15	0	0,0	0	0,0	0	0,0
	M16	0	0,0	1	0,3	1	0,1
	M17	0	0,0	0	0,0	0	0,0
	Total	**287**	**100,0**	**398**	**100,0**	**685**	**100,0**

Legend: XM – the winning team is losing by X; EP – the teams are tied; MX – the winning team is losing by X.

Result of using the "fast throw-off after conceded goal"

In the next table (Table 4) we observe all the ways in which an offensive sequence may end (throw / loss of ball due to technical or regulatory foul / ball loss by opponent / foul / stop for organization of attack / etc.) and its possible to observe that in general, the percentage of sequences ending with a shoot is very similar for the two groups of teams (34,8% vs 36,2%). However, the defeated teams are able to get more shooting situations, but also more technical fouls, and fouls suffered when they use this tactical action.

Table 4 - Result of attack sequences carried out by "fast throw after-goal" by winning and defeated teams.

	Winning		Defeated	
	n	%.	n	%
Throw	100	34,8	144	36,2
Fouls suffered	65	22,7	78	19,6
Technical foul	13	4,5	31	7,8
Defensive action of the opponent with loss of ball possession	2	0,7	2	0,5
Referee Interruption / game end	23	8,0	27	6,8
Entrance of the excluded player	4	1,4	4	1,0
"System Attack"	80	27,9	111	27,9
Defensive action of the opponent without loss of ball possession	0	0	1	0,2

Zone and situation where the shoot occurs

The results analysis expresses the zone and the situation in which the shoots of the teams occur considering the following items: 1st line throw; 2nd line throw in breakthrough; throws of pivot; throw of the wings; 7 meters throw; "air throw". It's possible to observe a clear difference between winning and defeated teams in the percentage of second-line shooting (shoots from breakthrough, wings and pivot) with 55% vs 45,1%, respectively.
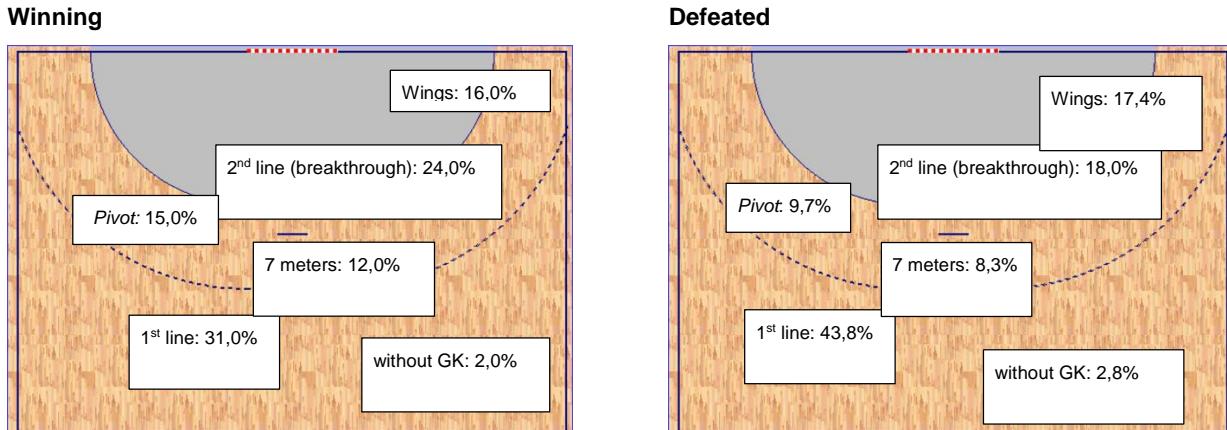
Winning

Defeated

Wings: 16,0%
2nd line (breakthrough): 24,0%
Pivot: 15,0%
7 meters: 12,0%
1st line: 31,0%
without GK: 2,0%

Wings: 17,4%
2nd line (breakthrough): 18,0%
Pivot: 9,7%
7 meters: 8,3%
1st line: 43,8%
without GK: 2,8%

Figure 1 - Percentage of goals scored by the winning and defeated teams, depending on the zone and situation (Legend: GK: Goalkeeper)

With regard to the efficacy of throw obtained by winning and defeated teams after the use of the fast throw-off after conceded goal (Table 5), it's possible to observe that the winning teams are clearly more efficacy.

Table 5 - Efficacy of throw obtained by winning and defeated teams.

	Throw efficacy %
Winning	74,0
Defeated	55,6

Effectiveness of the attack

In this last analysis, were considered all attacks that were finalized, either after shoots or loss of ball possession without a shoot. Table 6 presents the results of the effectiveness of the attack of the teams in situations of throw through the "fast throw-off after conceded goal" and as demonstrated the winning teams present a superior efficacy when compared to the defeated teams (67,9% vs 48,2%, respectively).

Table 6 - Efficacy of attack obtained by winning and defeated teams.

	Finalized Attacks (n)	Scored Goals (n)	Attack efficacy (%)
Winning	109	74	67,9
Defeated	166	80	48,2

Discussion

Considering that the aim of this study was not only to identify possible differences between winning and losing teams in the use of "fast execution of throw-off after a goal", but also to perceive the moments of the game when this strategy occurs, the way it ends, and the effectiveness these teams have at the highest competitions, it was observed that these results may reveal that the use of this strategy has assumed a greater preponderance among the teams that win, which may be related to the change in the game model of these teams, which now include this tactical element in the game. Already in 2011, it was mentioned by Šibila, that the training and the game of continuous and short attacks that translate into quick throws through different with tactical inaction has gained importance.

Moreover, the offensive sequences carried out by the teams where the fast throw-off was used, are between 4% and 6,4% (Miranda, 2016; Silva, 2008, 2011). However, the difference in the utilization of this strategy is lower than in previous studies, between winning and defeated teams. In our study we noticed that the defeated teams use this strategy more 4,1% than the winning teams, but in previous studies, this difference was much higher, but still used more often by the defeated teams, namely 11% (Silva, 2008), and 16,7% (Miranda, 2014).

Furthermore, the difference in utilization of this strategy is also observed when we analyze it according to the numerical ratio of the team in the game. It is observed that in the 7x7, winning teams use this strategy more often and another interesting fact is that in numerical superiority of 1 player, the winning teams seem to opt for the "system attack" when they are in superiority. Still when they are in inferiority, the teams clearly choose not to use, or use only in very specific cases this strategy. These results corroborate the findings of previous studies (Silva, 2008; Silva, 2011; Miranda, 2016) and may be related to the unpredictability of the "fast throw-off", since it always depends on the organization of the attack-defense transition of the opposite team or even with a possible lack of clear strategy of conduct of the players during this phase, or simply because they choose an "system attack".

Additionally, even when the teams are losing by three, four and five goals the teams use the fast throw-off as strategy, however it was observed, that in a similar situation defeated teams use this method more often. But when they are winning by one or more goals the winning teams continue to use this strategy, clearly realizing that this remains a tactical offensive option. In fact, when they are tied the winning teams clearly use this strategy more often compared to the defeated teams. It's realized that in teams that win, the "fast throw-off after goal conceded" is a strategy of permanently used play, as referred to in the current literature (Daza et al., 2017; Milanović et al., 2018; Šibila et al. 2011).

Considering all the ways in which an offensive sequence may end (throw / loss of ball due to technical or regulatory foul / ball loss by opponent / foul / stop for organization of attack / etc.), in general, was perceived that the percentage of sequences ending with a shoot is very similar for the two groups of teams. However, the defeated teams get more shooting situations when they use this tactical action, but they also end their attacks more often by technical foul. Still it is possible to observe that it is also similar the number of sequences that ends in "system attack". The results indicate that the winning teams are more prudent in the way of finishing the fast throw, often choosing to use the "system attack" instead of shooting. Moreover, it's clearly, that the winning teams are more effective in the shoot after situation of a conceded goal than the defeated teams, once as verified the winning teams finish more often of zones closer to the goal and, therefore, with greater probability of success. These results can be explained by the fact that the winning teams finish their offensive sequences, more times, with second-line throw compared to the defeated teams that bet on first-line throws, which will be less likely to have shoot effectiveness. The analysis allowed us to observe that the winning teams show a greater effectiveness in the situations of attack finalized by means of the fast throw-off after conceded goal in game. This difference translates to a higher percentage of concluded attacks without a shoot, or loss of possession of the ball due to technical / regulatory foul or action of the opposing team by the defeated teams, as referred. These results reinforce the knowledge already transmitted in the literature in which betting on the fast throw-off after goal conceded, entails risks, such as the need for a high physical condition, the possibility of an increase in technical failures, and a reduction in control of the game attack (compared to "system attack") (Silva, 2008; Šibila, 2012).

Conclusion

Fast throw-off after conceded goal is a collective tactical action by which the teams clearly choose as a means of achieving a goal. In this study we verified that the defeated teams use more often this strategy. Furthermore, they end these sequences of attack more times in technical foul and throw, sometimes in situations with a lower probability to score. The winning teams are more prudent in the way of finishing the fast throw, often choosing to use the "system attack" instead of shooting, and when they shoot, they try to throw closer to the goal which allows them to be more effective.

In disadvantaged situations the defeated teams choose to use this strategy more often, but when the game is tied is the winning teams that clearly bet on returning the ball quickly in game after goal. One of the most relevant conclusions is the fact that, when this tactical method is used to end the attacks, the effectiveness of the winning teams' is much higher than that of the defeated teams.

More studies are needed in this area in order to increase the knowledge about the importance that this strategy has in differentiating the final result of the teams.

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