

# The efficiency of football players in one against one game in the aspect of situational factors of a sports fight

## Authors' Contribution:

- A** Study Design
- B** Data Collection
- C** Statistical Analysis
- D** Manuscript Preparation
- E** Funds Collection

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## Abstract

The aim of research was to assess the efficiency of 'players-champions' performance in game situations one against one in the aspect of changing the result of a competition, the time and place of performance.

We analysed the game of Spanish competitors in 13 matches played in final tournaments of the World and European Championships in the years 2008–2010. The method of observation was applied. Information about the game was registered on a monitoring sheet of designed by the present authors, using criteria of performance assessment proposed by Szwarc. Activity, effectiveness and reliability of individual offensive and defensive performances were assessed in the context of realization of the aim of the game.

**Results:** It was noted that in one match Spanish footballers, the World and European Champions, performed on average from 184 to 253 encounters in fight situations one against one with average reliability of 56%. More frequently they got engaged in offensive play and performed it more reliably than defensive actions, and the efficiency of such performance was decreasing in course of the game. When the result of the game was favourable, they used a strategy of "defensive" offensive – at first they aimed at keeping the ball and/or at winning the field with it thus transferring the gravity of the game to the opponent's half. In circumstances of an unfavourable result, when the opponent was in possession of the ball, they tried to take it over already in the middle zone of the pitch and immediately create situations of scoring the goal.

**Conclusions:** The World and European Champions showed efficiency in individual performances similar to the previous winners of European and World tournaments. They got engaged in offensive performances more often than in individual defensive performances, which should be recognized as a feature characteristic of their style of play.

**Key words:** football • the World and European Championships • game situations one against one • efficiency of performance

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## BACKGROUND

The game and the fight as elements of reality are a social phenomenon, very often identified with each other. In praxeology the game is defined as an autotelic

or heterotelic activity with an unfavourable character of cooperation performed in accordance with certain rules; any conflict situation, in which there are at least two groups of opposing interests, represented by two or more participants of the game. Likewise in the fight, an

action of unfavourable cooperation, there are at least two offensive sides, each tending to view the situation in a way incompatible with the opponent's objective; they know about the opponent's actions and try to prevent them [1–3].

Both in the game and in the fight, there are sides in the conflict, camouflage and surprise, but the priority of a real battle is the physical and/or mental disposal or destruction of the opponent. In that case motivation is always unfriendly; what must be demonstrated is an advantage of skills over the opponent without unfriendly motives in the game.

Panfil considers a fight as a primeval form of conflict and a game as a civilized manner of dispute settlement. He maintains that a game is a way of resolving conflicts by demonstrating superiority over the opponent within a certain time, in accordance with accepted rules; a game, in contrast to the fight, does not lead to a definite settlement of the conflict. In fight, due to its ultimately decisive character in extreme situations, players do not respect commonly accepted rules and often break them [4].

In a sports fight the **intermediate floor** may degrade due to various circumstances, also in the combat ground, in which there is breaking of the rules, excessive aggression, inconsistency with rules, hurting the opponent. Intermediate floor fight is something primeval to the fight of the ground floor. In this sense, a sports fight and a game are identical, and the criterion for distinguishing them from the authentic fight is respecting the rules and regulations of competition [5–7]. By adopting this interpretation one should note that there is a great educational value of martial arts and sports games in forming aggressive action, because they combine aggressive behaviour with an opportunity to gain gratitude, they are a perfect form of shaping valour and preventing violence [8–10].

Both efficient, individual actions of competitors and a common, efficient solution of a fight situation arising in the game decide about the final success in the competition of the highest level of sport advancement. It should be remembered that realization of a common intention brings the meaning of individual performances to limits of team necessity, because in a team game only such individual performances are accepted which improve the team's performances. However, bringing competitor's performance only to actions subordinated to partners lowers satisfaction from participation in the competition, which, in result, can inhibit a player's motivation to take action [5].

It is the essence of the game that performances of its participants are always dependent on one another, and

the degree of this dependence is varied resulting mainly from the complexity of the situation in a game. The identification of efficiency of performances both relatively (individual) or absolutely (team) dependent on performances of partners in sport-effective teams has a key meaning for raising the effectiveness of the training process, since it allows rationalizing competitors' behaviours by relating their performances to objectified patterns and increasing the effectiveness of performance by imitating performances in game recognized as efficient [5].

Those individual performances of a competitor which are carried out with the ball against one rival or are performances of one player who is not in possession of the ball against a rival with the ball in situations of relative independence from partners (partners in a direct way do not influence realization of the aims of the game) can be called game (fight) one against one (game/fight 1×1).

1×1 game is a direct mutual influence of two players from competing teams, aiming at realization of contradictory objectives within rules determined by regulations. 1×1 game in attack means the totality of reactions and performances of a competitor who is in possession of the ball, taken against one rival in order to gain a point (goal) or create a situation for gaining it, or in intention to win the pitch and/or keep the ball. A competitor's behaviours and performances against the player with the ball in order to take it over, stop his performance or make it difficult to transfer the ball is game one against one in defence. Results of performances in one against one situations should be positively or negatively assessed in the aspect of realization of the goals of the game both in attack and in defence. However, habitual behaviours in surprising situations of fight for nobody's ball should be assessed positively in spite of the achieved intentions. A player's readiness to fight for nobody's ball and his activity in these situations (after all manifested without previous awareness of the choice of aims and ways of performance) are thus values in themselves, since they strengthen synergic effects of performance of the whole team. As an assessment criterion of these situations we can assume will (positive assessment) or abandoning (negative assessment) of taking up action [11].

The object of this study was to assess the efficiency of game performance in fight situations one against one among competitors of the best European Championships team in 2008 and World Championships in 2010 – Spanish players in the aspect of a changing result of the competition, duration of the game and the place of performance. The following research questions were formulated:

**Intermediate floor** – fight of an "intermediate floor" is the battle within the meaning as above, "ground floor" refers to military combat, and the "top floor" refers to a general theory of action, which includes the theory of fight [30].

**Table 1.** The register of analysed meetings including a favourable result in the first or second half of the match, after extra-time and with the competition of penalty kicks and with an unfavourable result.

Item No	Type of tournament*	Match	Result of the meeting (halftime score)
<b>Favourable result in the first half</b>			
1.	EC 2008	Spain – Russia	4:1 (2:0)
2.	EC 2008	Spain – Germany	1:0 (1:0)
3.	WC 2010	Spain – Honduras	2:0 (1:0)
4.	WC 2010	Spain – Chile	2:1 (2:0)
<b>Favourable result in the second half</b>			
5.	EC 2008	Spain – Sweden	2:1 (1:1)
6.	EC 2008	Spain – Russia	3:0 (0:0)
7.	WC 2010	Spain – Portugal	1:0 (0:0)
8.	WC 2010	Spain – Paraguay	1:0 (0:0)
9.	WC 2010	Spain – Germany	1:0 (0:0)
<b>Favourable result after extra-time or competition of penalty kicks**</b>			
10.	EC 2008	Spain – Italy	0:0 (0:0) aet 0:0, pk 4:2
11.	WC 2010	Spain – Holland	0:0 (0:0) aet 1:0
<b>Unfavourable result</b>			
12.	EC 2008	Spain – Greece	2:1 (0:1)
13.	WC 2010	Spain – Switzerland	0:1 (0:0)

\* WC – World Championships; EC – European Championships; \*\* aet – after extra-time; pk – penalty kicks.

1. What was the activity, effectiveness and reliability of individual offensive and defensive performances of Spanish competitors in game situations 1×1 in matches of the World and European Championships?
2. What was the efficiency of individual performances of Spanish footballers in fight situations 1×1 depending on: the duration of the game, changes of competition results, the player's place of performance?

## MATERIAL AND METHOD

The method of observation was used in the research. Audio-visual recordings of 13 matches were used to analyse performances of Spanish competitors at the final tournaments of the World and European Championships in the years 2008–2010 (Table 1). Information about the game was registered on a special observation sheet by replaying video recording and using the freeze-frame function. The way and the effect of a competitor's performance in the game situation one against one were noted with application of criteria proposed by Szwarc [11]. Performances registered in a regular 90-min game were assessed. The pitch was divided into three zones (defending, midfield and attacking) and the sector of **direct goal threat (DGT)**. The place and the time of occurrence of the event with the current result of the competition were registered.

In attack, the efficiency of actions in 1×1 game situation was assessed; its objective was scoring the goal, creating a situation to score it, winning the area of game with the ball and keeping the ball. In defence, the efficiency of actions in 1×1 game of a competitor with the ball was assessed; its objective was taking the ball over, kicking it out or breaking the opponent's performance. Activity in encounters for nobody's ball was always assessed positively, accepting the presented above Szwarc's justification. The goalkeeper's actions in 1×1 situation within his own penalty area were not assessed.

Ethics approval of this study was granted by the Scientific Board of the Faculty of Physical Education.

## RESULTS

From the information included in Table 2 it appears that in the 13 analysed meetings in the regular 90 minutes of game Spanish competitors played 2,940 encounters in game situation one against one (on average 226 situations in one match). In 6 matches of the European Championships they performed 1,288 encounters of one against one game (on average 215 situations in one match) and in matches of the World Championships 1,652 encounters (on average 236 situations in one match).

**Direct goal threat (DGT)** – Sector of direct goal threat (DGT) is a zone determined by course of agreed upon lines from goal posts to corners of the penalty area. Outside the penalty area this zone is extended in the direction of the midfield line of the pitch to the distance of 25 m from the goal [11].

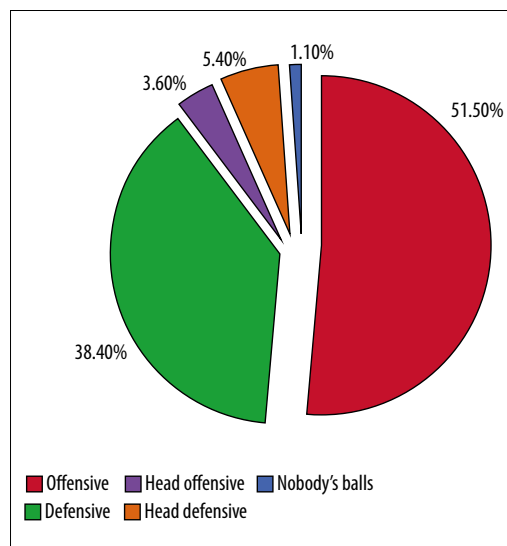
**Table 2.** The efficiency of performance in 1×1 game situations of the Spanish team of footballers in regular 90-min game.

Type of performance	Efficiency of performance (values)			
	Activity	Effectiveness	Reliability	Average number of performances in a match
Altogether	2940	1636	56	226
offensive	1515	921	61	117
header offensive	106	45	42	8
defensive	1129	529	47	87
header defensive	158	109	69	12
fight for nobody's ball	32	32	100	3
EC 2008	1288	703	55	215
offensive	638	363	57	106
header offensive	42	17	40	7
defensive	530	266	50	88
header defensive	50	29	58	8
fight for nobody's ball	28	28	100	5
WC 2010	1652	933	56	236
offensive	877	558	64	125
header offensive	64	28	43	9
defensive	599	263	43	86
header defensive	108	80	74	15
fight for nobody's ball	4	4	100	1

Altogether 1,636 actions in 1×1 game situation were assessed positively and 1,304 negatively (56% of reliability). In the European Championship 703 performances were assessed positively and 585 negatively (55% reliability); however, during the World Championships 933 encounters were assessed positively and 719 negatively (56% reliability).

From a detailed study of one against one game situation it results (Table 2 and Figure 1) that Spanish competitors applied 1,515 offensive duels (on average 116 encounters in one meeting) and 1,129 defensive duels (on average 87 encounters in one meeting) (52% and 38% of all performances in 1×1 game respectively). They performed 264 header duels (106 in attack, 158 in defence) and 32 times they were fighting for nobody's ball. They achieved the highest reliability in defensive header duels (69%) and the lowest one in offensive header duels (42%). Altogether they manifested a higher activity and effectiveness in attack than in defence (respectively: 55% and 60% and 44% and 39%).

From the information presented in Table 3 it results that Spanish competitors achieved the highest, 62%,



**Figure 1.** Percentage of particular types of actions in 1×1 game situation of the Spanish team competitors.

reliability in 1×1 fight in the match of the team phase in 2010 World Championships against the national team of Paraguay (quarter-finals), while the lowest,

**Table 3.** The efficiency of performance of the national team of Spain in 1×1 game situation in the observed matches including a favourable result (1<sup>st</sup> and 2<sup>nd</sup> half, after extra-time and with competition of penalty kicks) and an unfavourable result.

Item No	Type of tournament	Meeting (phase of tournament)	Activity	Effectiveness	Reliability
<b>Altogether</b>			2940	1636	56
<b>Favourable result – 1<sup>st</sup> half of the match</b>			878	468	53
1.	EC 2008	Spain – Russia (team)	229	125	55
2.	EC 2008	Spain – Germany (1/1)	184	93	51
3.	WC 2010	Spain – Honduras (team)	228	126	55
4.	WC 2010	Spain – Chile (team)	237	124	52
<b>Favourable result – 2<sup>nd</sup> half of the match</b>			1181	678	57
5.	EC 2008	Spain – Sweden (team)	243	138	56
6.	EC 2008	Spain – Russia (1/2)	205	120	59
7.	WC 2010	Spain – Portugal (1/8)	233	136	58
8.	WC 2010	Spain – Paraguay (1/4)	247	154	62
9.	WC 2010	Spain – Germany (1/2)	253	130	51
<b>Favourable results after extra-time, penalty kicks</b>			404	223	55
10.	EC 2008	Spain – Italy (1/4)	187	102	55
11.	WC 2010	Spain – Holland (1/1)	208	99	56
<b>Unfavourable result</b>			477	267	56
12.	EC 2008	Spain – Greece (team)	240	129	54
13.	WC 2010	Spain – Switzerland (team)	237	138	58

51%, reliability in both matches against the German team (semi-final, final)

The highest and the lowest activity in 1×1 game was noted in the World and European Championships, also in matches against the national team of Germany. In the final meeting of the European Championships in 2008, 184 encounters in 1×1 game were registered, and during the semi-final match at the World Cup 2010, 253 duels were noted (the same, 51% reliability of performance in both meetings).

The studied competitors proved the highest activity and effectiveness of the conducted performances in 1×1 game situations in matches with the favourable result achieved in the second half of the meeting and in matches with an unfavourable course of competition (Table 3). Out of the 13 studied meetings with participation of the national team of Spain, only one match with Switzerland in the team phase of tournament in 2010 ended with Spanish players' failure despite the fact that they achieved a higher reliability in 1×1 game (58%) than their opponents (42%).

The information in Table 4 shows that Spanish competitors indicated the highest activity and effectiveness in 1×1 game in meetings in which they were made to take action in the unfavourable course of competition (on average 238 performances in a match, 56% of reliability) and then when they took the lead in the second half of the match (on average 236 performances in a match with 55% of reliability). Also in drawn matches (favourable result achieved only in the competition of penalty kicks) they presented high reliability of performance in 1×1 game (on average 202 duels in a match, with 55% reliability of performance). Spanish footballers achieved the lowest (but also high) reliability of performance in matches in which they were already leading in the first half of the game (on average 219 duels in a meeting at 53% of reliability).

The results of research explicitly suggest that the competitors of the Spanish national team in situations of a favourable result of the game applied "defensive" offensive strategy of combat [4]. Being in possession of the ball they were aiming at keeping it, and at the same time they less frequently created situations to score a goal as a result of individual performance. On the other hand,

**Table 4.** Efficiency of performance in 1×1 fight situations including a favourable result (after the 1<sup>st</sup> and the 2<sup>nd</sup> half of the match and after extra-time) and an unfavourable result.

Type of performance	Efficiency of performance (values)			
	Activity	Effectiveness	Reliability	Average number of performances in a match
Altogether in all matches	2940	1636	56	226
In attack	1621	965	60	125
In defence	1287	639	50	99
Nobody's ball	32	32	100	3
Result favourable after the 1 <sup>st</sup> half	878	468	53	219
In attack	448	258	58	112
In defence	422	202	48	105
Nobody's ball	8	8	100	2
Result favourable after the 2 <sup>nd</sup> half	1181	678	57	236
In attack	684	407	60	137
In defence	484	258	53	97
Nobody's ball	13	13	100	3
Draw, result favourable after extra-time	404	223	55	202
In attack	217	130	60	108
In defence	183	89	47	92
Nobody's ball	4	4	100	2
Unfavourable result – loss	477	267	56	238
In attack	272	171	63	136
In defence	198	89	45	99
Nobody's ball	7	7	100	4

in situations of an unfavourable result of competition they intended to change the existing state of game; they tried to achieve the field of play with the ball more frequently and to create situations for scoring a goal, also by individual performances.

Results of research on the efficiency of performance of Spanish competitors in 1×1 game situations plus 15-min periods of competition are included in Table 5. From this information it appears that the activity of the studied footballers in 1×1 game situation was rather varied. The Champions of the World and Europe were the most active in 1×1 game in the first quarter of the first and the second half of the game (respectively: 514 duels – on average 39 encounters in one meeting and 527 duels – on average 40 encounters in one meeting) whereas they definitely got engaged more frequently in offensive performances (288 and 283 performances) than the defensive ones (220 and 239 performances).

A similar, intensified activity in conducting 1×1 fight in the first and the last 15 minutes of the first half and in the initial and the final phase of the second half of the match was observed by Reichelt [12] and Loy [13] in the teams studied by them during tournaments of the European and World Championships.

Detailed results of the research included in Table 5 confirm the previous conclusion. The intensified activity in undertaking individual performances in the initial phase and the second half and the final phase of a match, first of all in situations of an unfavourable result, resulted from accepted by the team of the World and European Champions strategy of game defined as “offensive” attack [4]. According to its assumptions, the players were aiming at winning the field of play with the ball creating the situations to score goals and scoring them to change the present result of competition. Having achieved the plan, they assumed the variant of

**Table 5.** The efficiency in performance in 1×1 game situations in 15-minute intervals including a favourable result of game after the 1<sup>st</sup> and the 2<sup>nd</sup> half of the match, after extra-time and when the result was unfavourable.

Performances 1×1*	Game duration																	
	0'–15'			15'–30'			30'–45'			45'–60'			60'–75'			75'–90'		
	A	E	R	A	E	R	A	E	R	A	E	R	A	E	R	A	E	R
Matches altogether	514	292	57	437	234	0.54	489	267	0.55	527	282	54	481	287	60	492	274	56
In attack	288	174	60	221	125	57	262	152	58	283	165	58	284	185	65	283	164	58
In defence	220	112	51	207	100	48	222	110	50	239	112	47	191	96	50	208	109	52
Nobody's ball	6	–	–	9	–	–	5	–	–	5	–	–	6	–	–	1	–	–
Favourable result after the 1 <sup>st</sup> half	156	82	53	132	70	53	144	85	59	167	80	48	149	85	57	130	66	51
In attack	74	45	61	60	36	60	83	50	60	70	35	50	87	52	60	74	39	53
In defence	81	36	44	68	30	44	61	35	57	96	44	46	60	31	52	56	27	48
Nobody's ball	1	–	–	4	–	–	–	–	–	1	–	–	2	–	–	–	–	–
Result favourable after the 2 <sup>nd</sup> half	207	114	55	178	96	54	199	105	53	198	123	62	188	123	65	211	117	55
In attack	125	70	56	94	51	54	108	58	54	127	83	65	117	79	68	113	66	58
In defence	78	40	51	81	42	52	87	43	49	71	40	56	70	43	61	97	50	52
Nobody's ball	4	–	–	3	–	–	4	–	–	–	–	–	1	–	–	1	–	–
Draw, result favourable after extra-time	72	51	71	58	29	50	64	37	58	82	40	49	63	30	48	65	36	55
In attack	41	30	73	30	16	53	30	19	63	41	24	59	35	19	54	40	22	55
In defence	31	21	68	28	13	46	33	17	52	40	15	38	26	9	35	25	14	0.56
Nobody's ball	–	–	–	–	–	–	1	–	–	1	–	–	2	–	–	–	–	–
Unfavourable result/lost match	79	45	57	69	39	57	82	40	49	80	39	49	81	49	60	86	55	64
In attack	48	29	60	37	22	59	41	25	61	45	23	51	45	35	77	56	37	66
In defence	30	15	50	30	15	50	41	15	37	32	13	41	35	13	37	30	18	60
Nobody's ball	1	–	–	2	–	–	–	–	–	3	–	–	1	–	–	–	–	–

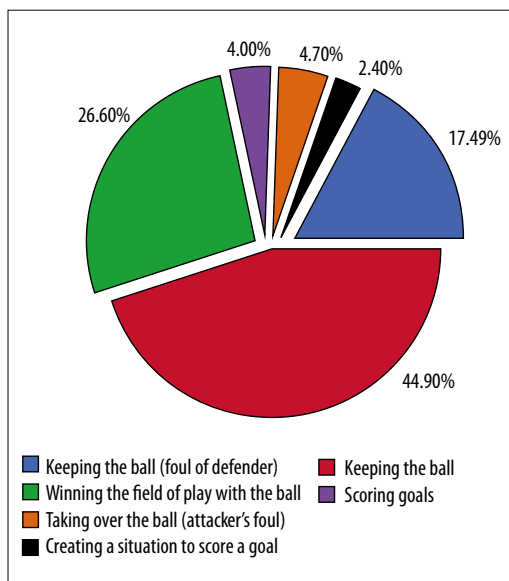
\*A –activity; E –effectiveness; R –reliability.

fight defined as “defensive” attack in order to maintain the favourable result of the match.

On the other hand, the highest reliability in 1×1 game situations was observed in competitors of the Spanish team in the first quarter of the game (57%) and in the middle (60%) and the final (56%) phase of the match, while the lowest one (54%) between the 15<sup>th</sup> and the 30<sup>th</sup> minute of the match. Similar 54% reliability of performance at the highest activity was noted in the first 15 minutes of the second half of the game.

In all the studied categories of meetings, a decrease in activity in conducting individual performances was noticed in the 1×1 game situation in the interval between the 15<sup>th</sup> and the 30<sup>th</sup> minute of the meeting with an identical or lower effectiveness, as well as in other phases of the game. In the second part of the match, between the 60<sup>th</sup> and the 75<sup>th</sup> minute of the game, the World and European Champions proved the highest total reliability in 1×1 situations (60%) considering intervals in the last quarter of the game when its result was unfavourable (reliability 64% – in defensive performances 61% and in offensive





**Figure 2.** Percentage of particular types of individual offensive performances produced effectively by Spanish players in regular duration of the game.

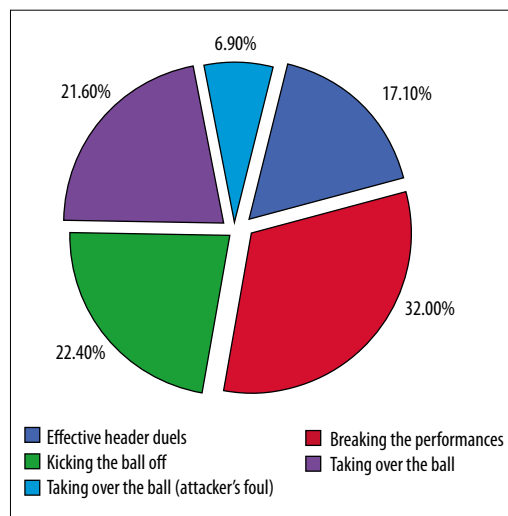
performances 66%). The efficiency of the Spanish team competitors in individual actions certifies their high abilities of game, offensive style of play and decisiveness in aiming at changing the unfavourable result of tackling [14].

The numerical information listed in Table 5 indicates that the Spanish competitors in 1×1 game situation more frequently and more reliably applied offensive than defensive duels. The activity and effectiveness of these performances was higher than the efficiency of defensive performances in all categories of meetings and the studied intervals. Only in one case of the last quarter of game at the unfavourable result of competition, after competition of penalty kicks, a slightly higher (by 1%) efficiency in defensive performances was noted.

From the information presented in Figure 2 it results that among the World and European Champions offensive performances dominated, whose aim was to win the field of play with the ball (26.6%). Effective header duels and creating situations for scoring goals constituted only 11.1% of all individual offensive performances.

On the other hand, in defensive performances Spanish footballers were the most effective in breaking the opponent's actions (32%), in kicking off (22.4%) and in taking the ball over from him (21.6%). They won 17.1% of header duels and in result of violation of rules of the game by attacking the rival they won the ball 44 times (6.9%) in game situation one against one (Figure 3).

From the information presented in Table 6 and in Figure 4 it results that footballers of the Spanish team



**Figure 3.** Percentage of particular types of individual defensive performances produced effectively by Spanish players in regular duration of the game.

played 1628 situations 1×1 (56%) on the opponent's of the with 55% of reliability, and on their own 1312 duels with 56% of reliability. They showed the highest activity of performance in the central zone of the pitch and in the zone of attack (respectively: 1467 and 865 encounters) and the lowest one in the defence zone (576 duels). They performed more reliably than their rivals in all zones of the field of game (defence – 55%, centre – 56%, attack – 54%). The World and European Champions performed 398 actions in 1×1 game situations in the zone of direct opponent's goal threat (DGT) with 55% of reliability, which constituted 46% of all performances in 1×1 game situation in the zone of attack. On the other hand, the opponents in their sector of direct goal threat played 211 duels, which constituted 36.6% of 1×1 actions in the defence zone, with 54% of reliability.

## DISCUSSION

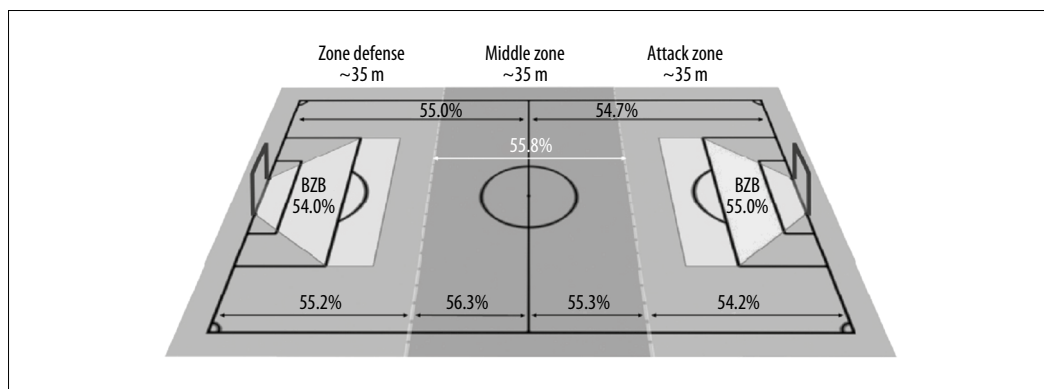
It appears from the research results presented in the previous chapter that the players of national team of Spain performed on average 226 actions in one against one game situation with 56% of reliability in one match in the regular 90 minute duration of the game. They showed higher efficiency of these performances in the World Cup matches than in meetings of the European Championships, which should be explained by a bigger diversity of their opponents' game abilities in both events. Rivals of the Spanish team from the European final tournament presented a more even and higher sports level than the opponents of the Spanish team from the 2010 World Cup.

The obtained results of research correspond with earlier reports of other researchers. For example, Loy proved



**Table 6.** The efficiency of performance of Spanish players in 1×1 game situations in particular zones and sectors of the field of play.

Type of performance	Efficiency of performance (values)			Average number of performances in a match
	Activity	Efficiency	Reliability	
Own half	1280	714	56	98
In attack	401	253	63	31
In defence	879	461	52	68
Defensive zone of Spain	576	318	55	44
In attack	133	80	60	10
In defence	443	238	53	34
Midfield zone of Spain	704	396	56	54
In attack	268	173	65	21
In defence	436	223	51	33
Opponent's half	1628	891	55	125
In attack	1206	704	58	93
In defence	422	187	44	32
Midfield zone of the opponent	763	422	55	59
In attack	472	293	62	36
In defence	291	129	44	22
Attacking zone	865	469	54	67
In attack	734	411	56	56
In defence	131	58	44	10



**Figure 4.** The reliability of performance of Spanish competitors in 1×1 game situations in particular zones and sectors of the field of game.

[13] that German competitors in the World Cup matches in 1990 played on average 190 duels with 55% reliability. His further analyses based on observation of 15 meetings of the final tournament of the European Football Championships in 1992 showed [15] that on average the players performed also 190 encounters in game situation one against one in one match and the

vice-champions of Europe – Germans indicated 52% of reliability in these performances. From Schäfer's research it appears [16] that in 3 meetings of this tournament the players performed on average 218 duels in one match. A considerable difference in the number of found performances resulted from applying a different research methodology.

From the presented information, also by Loy [15], it follows that the participants of the 1994 World Cup produced on average 205 performances in 1×1 game situations in one match. Competitors of a World Cup team – Brazilians achieved 53% performance reliability including 63% in defence and 35% in attack. Wrzos's research [15] shows that the World Champions from 1998 – footballers of France – achieved a 63% index of performance reliability in 1×1 game.

On the basis of observation of matches of the Champions League and the Polish League Szwarz [11] calculated that footballers produce on average 215 performances in game situation 1×1 in one meeting and are more effective in defence than in attack (respectively: 63% and 50%). Analysing situations in 1×1 game in 1988 Euro matches, in Reichelt's opinion [12], none of the studied by him teams achieved a reliability index in individual encounters higher than 58%. Its results are analogical to observations of Friling [18], who proved 59% reliability of individual performances of participants in the final match of the first Women's World Cup in 1991 and of Przybylski [19], according to whom the reliability of individual performances of the World Champions from 1994 fluctuated within limits from 57% to 60%.

Summarizing the review of the presented standpoints and the results of own research, it should be noted that the studied by us Spanish footballers – the World and European Champions indicated similar efficiency in individual performances as the winners of previous European and World tournaments. However, they were engaged much more frequently and effectively in offensive performances (on average 127 performances from 60% of reliability) than in individual defensive performances (on average 99 performances from 50% of reliability), which should be recognized as a characteristic feature of their style of game.

In our research we stated an increased activity of Spanish players in undertaking individual performances in the initial phase and in the second half of the match and the final quarter of the game. Reichelt [12] and Loy [13] observed similar intensified duels in game in the studied by them finalists of the World Cup and the European Championships. It is worth mentioning in this place the research by Grant et al. [20], Yiannakos and Armantas [21], and Njororai [22, 23]. The research proved that in football the most goals are scored in the last and the first quarter of the game.

It seems that high activity of performance of the studied by us footballers in these periods of the game, first of all in situations of an unfavourable result, resulted from the accepted by them strategy of game determined

as “offensive” attack. According to its assumptions, all players aimed at winning the field of game with the ball, creating the situation to score goals and scoring them in order to change the present result of competition. Having achieved their purpose, they accepted a variant of “defensive” attack to keep the favourable result of game. Such behaviours in accordance with the general theory of combat is also observed in other sports [4]. For example, in combat sports competitors exhibit increased activity in the early phase of the competition in order to gain advantage over the opponent and then take steps to maintain the gained advantage [24–26].

“Offensive” attack in the first 15 and 30 final minutes of the match was reflected in a number of created situations for scoring goals, shots at the goals and scored goals. In these periods of game, in the result of individual offensive performances, Spanish competitors were shooting 34 times at the goal (altogether they produced 54 shots), scored 8 goals from the total number of 13 scored goals in game result 1×1.

It should be emphasized that the results of this research will verify our previous analyses [27] and Friling's reports [18], according to which, during the Women's World Championships in 1991, as many as 18 from 23 goals were scored in effect of the won encounter in 1×1 game. On the other hand, Wrzos proved [17] that 46% of all goals at the 1998 World Cup were scored in result of individual performances. Furthermore, it is worth adding that the Spanish team researched by us, scored one goal as a result of fight for nobody's ball.

Competitors of the Spanish team indicated the highest efficiency of individual offensive performances in the initial phase of the game, which was decreasing along with the passing of the game (decreasing activity and efficiency of performances). In the second half of the match they intensified offensive duels both in situations of a favourable result and the unfavourable one, and they achieved their highest reliability (65%) between the 60<sup>th</sup>-75<sup>th</sup> minute of the game.

An analysis of individual game of the studied competitors in the aspect of the place of performance confirmed earlier reports, among others by Loy [13] and Wrzos [17]. Loy calculated that the players of the World Championships from 1990 played 53% duels on the opponent's half of the field of play, and researching the game of teams participating in the 1998 World Cup, Wrzos proved that the reliability of players' individual performances was the highest in the defensive zone and the lowest one in the attacking zone, and he stated reverse tendency only in the case of the World Champions – the team of France. The Spanish competitors studied by us also indicated

equally high reliability of duels in the defensive zone and in the midfield zone and slightly lower in the attacking zone [28]. Those facts explicitly confirm that they apply, depending on the current result of competition, the “offensive” attack strategy or the “offensive” defence. In the situation of possessing the ball they immediately aimed at winning the field of play with the ball and creating a situation for scoring a goal, and in the case of possessing the ball by the rival, they were intending to immediately take it over and/or break the opponent’s performance already in his defensive zone or in the midfield zone.

Similar conclusions come from the research by Szwarc and Dolanski [29] and Szwarc and Kromke [27]. Studying the game of the highest sport level competitors, they noticed that, in the situation of the currently favourable result the champion players as a rule apply the tactic of “defensive” offensive, the purpose of which is keeping the ball both by cooperation and individual performances. At the unfavourable result they intensify individual and team performances in order to change the result of fight. Furthermore, the researchers emphasize that intensification of offensive performances is assisted by a decrease in their reliability, along with increasing efficiency in offensive performances. The Spanish team studied by us stands out from this standard. The basis of success of the European Champions from 2008 and the World Champions from 2010 lay in high efficiency in producing offensive performances in situations one against one, in particular at the initial and the final phases of the game, which was exemplified by a very attractive for the audience style of game of this team.

## CONCLUSIONS

The World and European Champions indicated similar to the previous winners of European and World tournaments efficiency in individual performances. However, they got engaged much more frequently and efficiently in offensive performances than in individual defensive performances, which should be recognized as a characteristic feature of their style of game.

Competitors of the Spanish team indicated the highest efficiency of individual offensive performances in the initial phase of the game, which was decreasing along with passing of the game. In the second half of the match they intensified offensive duels both in the situation of a favourable and unfavourable result, and they achieved the highest reliability of performance in the final phase of the game. Depending on the current result of competition Spanish players applied the strategy of “offensive” attack or “offensive” defensive. In the situation of possessing the ball they immediately aimed at winning the field of game with the ball and creating a situation for scoring the goal, and in the case of possessing the ball by the rival they were aiming at immediately taking it over and/or breaking the opponent’s performance already in his zone of defence or the midfield zone.

The identification of efficiency of individual offensive performances in sport effective teams has a key importance for raising the efficiency of the training process, since it allows rationalizing competitors’ behaviours by referring their performances to objectified patterns.

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