Series: Physical Education and Sport Vol. 13, No 1, 2015, pp. 97 - 105

Systematic review

#### THE SITUATION SUCCESS IN THE HANDBALL: REVIEW

UDC 797.012

### Jelena Vukosavljević, Miodrag Kocić, Dragana Berić, Milan Stojić

Faculty of Sport and Physical Education, University of Niš, Serbia

Abstract. The game of handballfeatures a variety of typical and atypical situations in the game, so there is a need of the objective registration of certain situations in the game, respectively the parameters of situation efficiency of each player in a competition and situational conditions. During the game it is possible to record all the successful and unsuccessful moves of each player individually, for example the number of balls directed toward the goal, the numbers of scored goals, the percentage realization of shots on goal, turnovers and more. That way we obtain objective data of player efficiency. The parameters for the assessment of situational success, according to the rule, are collected during big competitions because they already have established methods for the registration of certain parameters on specific games and during the competition (official statistics IHF or EHF). The purpose of this study is to collect and examine papers published in the last 15 years concerning situational efficiency in handball, for the determination of the relevance of the obtained data for success in thegame of handball.

Key words: handball, situational success, training.

### Introduction

Success in sport and sports results depend on many factors, whose determination is impossible, especially their dynamics, nature or influence. Different typical and atypical situations in the game are a part of handball, so there is need for the objective registration of specific game situations, situational parameters of each player's efficiency in competition and situational conditions (Vuleta, Milanović & Sertić, 2003). During the game it is possible to note each successful and unsuccessful move of each player, for example the number of shoots at the goal, the number of scored goals, the realization percentage of goal shots, lost balls, technical mistakes, fouls, good and bad defenses of the goalkeepers and a lot more. The efficiency of resolving situations in team sport games depends on functional

Received January 13, 2015 / Accepted March 04, 2015

Corresponding author: Jelena Vukosavljevic

Faculty of Sport and Physical Education, University of Niš, St. Čarnojevića 10a, 18000 Niš, Serbia

Phone: +381 18 510900 • E-mail: jeka.vukosavljevic88@gmail.com

relations (the quality of cooperation) among the players within the framework of the selected tactical model of the team's playing and of the potential and actual quality of players(Trninić, Papić & Trninić, 2011). Performance analysis in team sports is a basic tool for trainers to provide reliable and valid information related both to their own teams and rival teams. Effective competition analysis is required to identify the extent of the relevance of theobtained information and whether it can be used to improve performance or not (Sampaio & Janeira, 2003). Nowadays thanks to technological innovations regarding match analysis, thetechnical analysis of data of top-level teams is easily obtained for training and thescientist conducting research in the field. Scientific studies are required to indicate how data are used by national and club teams, and to provide new aspects.

The parameters for theassessment of situational success, according to some rules are collected at big competitions because they have established a correct method of certain parameter registration (official statistic of theInternational Handball Federation - IHF or official statistics of the European Handball Federation - EHF) on specific games and during all competition (Czerwinski, 2000). One of the most important abilities that determines team success (in handball) is precision because of its use during shooting and its direct influence on the score. Nićin & Kalajdžić (1996) define precision as theability to make correct moves which are targeted and with the right amount of dosed movements.

#### THE METHOD

The descriptive method was used for collecting and analyzing previous studies, of which 20 research papers were selected. Internet websites, such as "Pub-Med", "Mendeley", "Google Scholar" and the "Kobson" database were used to collect previous studies. The key words used in the search included: handball, situational success, training. The search was limited to papers published in last 15 years, and all of them were written on the topic of situational success in handball.

## Research systematization

The sample of participants differed in all thepapers. The number of participants ranged from 17 in (Ohnjec, Grujić & Vuleta, 2007) to 155 participants in (Srhoj, 2002). In seven studies the participants were all females (Srhoj, 2002; Ohnjec et al., 2007; Ohnjec, Vuleta, Milanović & Gruić, 2008; Calin, 2010; Pavlovič, Talovič, Kazazovič, Kazazovič & Lakota, 2013; Vuleta, 2013; Bubalo, 2013), in 12 (Srhoj, Rogulj & Kati, 2001; Gruić, Vuleta & Milanović, 2007; Demir & Stanković, 2007; Duda, Spieszny & Tabor, 2009; Alexandru & Alexandru, 2009; Vuleta, Ćurak & Lovrić, 2011; Vuleta, et. al., 2012; Vuleta, Majić, Vuleta & Ohnjec, 2013; Foretić, Rogulj & Papi, 2013; Vuleta, 2013) the participants were only men, while in one study both sexes were included (Foretić, Rogulj, Srhoj, Burger & Rajković, 2011). The longest training period was 4 weeks in Srhoj (2002), and consisted of 5 training sessions a week, 80 to 90 minutes each. Most games, 101, were analyzed in two studies (Rogulj & Trnin, 2010; Foretić et al., 2013). In 11 studies (Ohnjec et al., 2007; Gruić et al., 2007; Duda et al., 2009; Perkovac, Vuleta, & Vuleta, 2009; Vuleta et al., 2011; Rogulj et al., 2010; Foretić et al., 2013; Foretić et al., 2013; Pavlovič et al., 2013; Bubalo, 2013) the situational success of all player positions were surveyed, and in one (Vuleta, 2013) the situational success of the goalkeeper was surveyed and in (Vuleta,

2013) situational success of outline attackers was surveyed. In four studies, situational efficiency during attacks was analyzed (Duda et al., 2009; Perkovac et al., 2013). In two studies (Srhoj, 2002; Pavlovič et al., 2013) motor abilities and situational efficiency were analyzed. The highest number of variables used for the assessment of situational efficiency was 48 in (Foretić et al., 2013). The influence of situational efficiency on the end result in handball was analyzed by (Srhoj et al., 2001). The statistics from the World Cup were collected in seven papers (Gruić et al., 2007; Perkovac et al., 2009; Rogulj et al., 2010; Vuleta et al., 2011; Foretić et al., 2011; Bubalo, 2013; Vuleta et al., 2013; Foretić et al., 2013), three are from European championships (Ohnjec et al., 2007; Bubalo, 2013; Vuleta et al., 2013), two are from different handball schools (Srhoj, 2002; Demir et al., 2007) and one is from the University league (Srhoj, 2002). One study (Calin, 2010) analyzed the efficiency of using fast breaks. Table 1. shows the number of participants andthe research problem.

**Table 1**A chronological review of the selected papers

Authors and year	Age	Sex	Sample of	Duration of	Position	Researched ability
			participants	the research	in the	
			or games		team	
			collected			
1. Srhoj, Rogulj, &	Seniors	m	80 matches	N/A	All	18 predictor variables
Kati,2001.						on the final match
						result
2. Srhoj, 2002.	13 years	f	155 players	4 years, 5	All	13 motorabilities,
				times a		15 situational-motor
				week, 80-90		tests
				min		
3. Ohnjec, Grujić, &	Seniors	f	17 players	9 days	Attack	Situational success in
Vuleta, 2007.					for all	the attack
4. Gruić, Vuleta, &	Seniors	m	60 games	12 days	All	Differences in the
Milanović, 2007.						variances of situational
						factors among teams
						and the contribution of
						standard performance
						parameters to the
						criterion of success
						in handball matches
						defined as a goal
						difference in the final
						matchscore
5. Demir, &	14-16	m	77 players	N/A	All	6 situational-motor
Stanković, 2007.	years					tests
6. Ohnjec, Vuleta,	Seniors	f	60 matches	N/A	All	3 shooting
Milanović, &						efficiency parameters
Gruić, 2008.	40.00		•••	27/1		
7. Duda, Spieszny,	19 - 23	m	20 players	N/A	Attack	3 situational-motor
& Tabor, 2009.	years					tests in two levels
						(with and without
						instruction)

Authors and year	Age	Sex	Sample of participants or games	Duration of the research	Position in the team	Researched ability
			collected		team	
8. Perkovac, Vuleta, & Vuleta, 2009.	Seniors	m	15 players	15 days	Attack for all	7 variables of situational efficiency duringthe attack
9. Alexandru, & Alexandru, 2009.	Seniors	m	First four highest ranking teams	N/A	All	7 variables of situational efficiency
10. Rogulj, & Trnin, 2010.	Seniors	m	101 games	15 days	All	3 variables of situational efficiency during the attack
11.Calin, 2010.	Seniori	f	101 games	16 days	All	Efficiency of using fast-breaks
12. Vuleta, Ćurak, & Lovrić, 2011.	Seniors	m	10 games	15 days	All	4 variables of situational efficiency
13. Foretić, Rogulj, Srhoj, Burger, & Rajković, 2011.	Seniors	m/f	48 teams	16 days	All	12 variables of situational efficiency
14.Vuleta et. al., 2012.	Seniors	m	30 games	15 days	All	7 variables of situational efficiency
15. Vuleta, 2013.	Juniors (goalkee pers)	f	94 games	15 days	Goalkee pers	7 variables of situational efficiency
16. Vuleta, Majić, Vuleta, & Ohnjec, 2013.	18 years	m	16 teams	11 days	All	Situational efficiency
17. Foretić, Rogulj, & Papi,2013.	Seniors	m	101 games	15 days	All	48 variables of situational efficiency
18. Pavlovič, Talovič, Kazazovič, Kazazovič, & Lakota, 2013.	Seniors	f	77 players	N/A	All	18 basic motor abilities, 5 situational- motor tests
19. Vuleta, 2013.	Seniors (outline strikers)	m	8 players	17 days	8 Attack players	6 standard variables of situational efficiency
20. Bubalo, 2013.	Seniors	f	17 players	11 days	All	Situational efficiency

N/A-not applicable

#### RESULTS

Srhoj(2002) has defined two ways of solving complex situational assignments. One way is the use of complete energy for scoring a goal. The other way is the use of different moving types to score a goal. In the study of (Vuleta, 2013) where situational success of the goalkeeper was observed, the conclusion was that goalkeepers of winning teams have the highest number of unsuccessful defenses when the opponent is shooting from a pivot position and the seven-meter position, while goalkeepers of losing teams have lower amounts of successful defenses from nine-meter shoots and shoots from the back play

position. Differences between basic motor and situational-motorabilities of female handball players were studied by (Demir et al., 2007; Pavlovič et al., 2013). Afterthe analysis of both spaces, the authors concluded that the realization of situational-motor abilities, primarily the strength of the throw-out, is determined by the morphological dimensions in whole, specifically measures for the assessment of the circular and transversal dimensions, with clear differences in situational efficiency in different competition levels. Duda et al., (2009) researchedthe influence of mental analysis on motor efficiency in the actions performed by handball players. In two studies (Gruić et al., 2007; Vuleta et al., 2011), situational success was assessed by the number of successful shots, assists and number of technical mistakes. Rogulj et al., (2010) showed the importance of side players in handball and their influence on the score, based on the number of successful shots from side positions during a match between two high quality handball teams. As for player positions in handball, there are only two studies from the same author which specifically analyzed the goalkeepers situational successand outline attackers(Vuleta, 2013). Vuleta (2013) concluded that upon comparing the goalkeepers of winning and losing teams, the winning team had more defenses from back play positions (if defense formations are excluded), and that goalkeepers have most unsuccessful defenses from pivot positions (the six-meter line), and from the seven-meter line. Hence, in World Championships, players on side positions have shot 249 times on the goal, scoring 138 goals, which is a 55% successful realization, while the number of shots from wing positions were 152, the number of goals was 109, which is 72% of success, and the least number of shots came from position of circular attacker, 32, scoring 19 goals, approximately 59% (Vuleta, 2013).Based on the research results which analyzed situation efficiency during an attack (Duda et al., 2009; Perkovac et al., 2009; Vuleta, 2013), deficits in team positions can be determined (positions with lowest goal realization) and those deficits need to be taken into account by experts and coaches, so that they can improve their team game for the upcoming competitions. Calin (2010) studied the fast break efficiency on the top four teams at the World Championship in China, 2009, and found that the place of the fast break in modern female handball was extremely precise, and accounted for 23% (1351) of all the goals scored at that championship.

#### DISCUSSION

The subject matter of this review was the determination of situational success in the aforementioned selected studies, and the goal was to see the benefits of situational success in handball in order to bring the game to the next level.

The authors who conducted this research concluded that situational success is represented by complete behavior in the current situation during the game, all for the successful achievement of tasks which include passing the ball, catching the ball, shots on goal and scoring a goal in the attack phase. On the other hand, in the defense phase, the right timing to prevent the opponent for doing the same thing (pass, catch the ball, shot on goal, score the goal). During the game the same situation cannot repeat twice(Rogulj, 2003). It is clear that during the training process we must adapt players to many actions, situations and ask for most reasonable reactions. If we want to improve situational success, it is necessary that players be technically and tactically trained for elements and game tactics, and physical and technical skills are raised to the highest level possible.

Situational successin the defense phase is based on a high level of physical condition in all forms: the strength and velocity of the entire body, the strength and velocity of the limbs, especially the arms. Nevertheless, endurance is important, dexterity and agility also, and some virtues such as courage, self-confidence, perception.

Handball consists of a beginning, middle and end of the game. The game can be studied from the value aspect and current score. As seen from each of these situations, specific situational success is needed.

Situational efficiency of players, or of a team, can be observed in different phases and subphases of play in a match. The main phases of the game of handball are attack and defense, depending on the ball possession. Two transitional phases, the phase of returning to defense and the phase of the counter-attack, are derived from the main ones (Vuleta, 1997).

Every shot that becomes a goal is written in favor of the team as a score, and has an important impact on the competition result(Gruić et al., 2007). In this study, it was established that in the winning team's throwing efficiency, shot efficiency, fast-break and setter shot efficiency were higher than in thelosing teams (bothEuropean Championship and Olympic Games teams). This research results emphasizes that fast-break is an important factor regarding winning the match in handball, indicated in a lot of studies that can be found in the relevant literature (Vurgun, 2010). The fast break has become one of the main concerns for all good teams and also an efficient way of scoring goals. Beginning with the analysis of games played in the European and World Championships and Olympics, we synthesize the main aspects of the modern game (Johansson & Spate, 2004). A fast break represents the phase in which the ball, reentered in the possession of the defending team in the shortest way (goalkeeper – player or goalkeeper – intermediary – player), is finalized and the opponent players do not have sufficient time to position themselves in an organized system of defense. Due to its efficiency, the fast break should be used by every team aiming to succeed at the highest levels of the sport (Calin, 2010).

In women's handball, the same was true for fast break efficiency. Ohnjec et al., (2008) reported that fast break goals had a significant positive influence on goal-difference during the 2003 women's World Championships in Croatia. The successful teams used the fast break to score "easy goals" more often than the losing teams.

Gruić et al., (2007) investigated the situation-related efficiency or performance using a sample of 60 handball matches. Twenty-four different national teams were divided into four preliminary groups of six teams. The criterion variable was defined as the final match outcome. They reported that the characteristics of successful teams with better fast break scoring efficiency were as follows: adequate defense system selection, quick reaction to the opponent's unsuccessful shot, fast running (sprint and "sharp" and accurate ball transmission), and a good selection of shooting techniques.

Srhoj (2002) analyzed the influence of eighteen predictor variables on the outcome of eighty top-level handball matches, to establish the significance of the positional direction of the attack end on successful plays. The frequency and the effectiveness of shooting from different playing positions were defined by these predictor variables. They reported that the pivot attacker position, the break-through and fast break shoots had a significant influence on the resulting success.

Based on cumulative statistics from the 2009 World Championships, (Alexandru et al., 2009) found that the most effective shooting position for scoring was the fast break throw (88.23%), followed by the break-through position shot (75%). The analysis of the contribution of goal situations for scoring showed that pivot position efficiency was the second most efficient, at a rate of 15.63%.

The fact that goalkeeper efficiency and the ball number saved by goalkeepers are also studied as important factors regarding winning the match. The most important factors affecting winning the match are throw and shot efficiency. As a result, the fact that every offence ends with success is related to effective shot performance (Gruić et al., 2007).

Duda et al., (2009) have proved that by removing mental stress while working on predictable and unpredictable situations situational and motor success improve, and that the key for the achievement of maximal situational success is mental the stability of handball players.

The proper selection of future male and female handball players is necessary in their early phase of life as a first step that is necessary for achieving this goal. This selection must be scientific and also subjective by the person who is conducting it. Although handball players are desirable, the focus should be on the participants who are good working material. As for the selection of older category players, the goals of the club, composition and player spot in the team need to be considered.

The most important conclusion is that performance and success in contact team sports depend on many various factors, and that situational efficiency models are different with each team and at almostevery match (Gruić et al., 2007).

#### CONCLUSION

After reviewing all the included studies it is concluded that a high specialization of players, considering their place in the team, is present. A good goalkeeper needs to have more than 50% successful defenses, a good back player needs to have over 60% successful shots, a good wing player need to score over 75% of his shots, and a good pivot player needs to have more than 80% successful shots. With the help of IHF statistic data it is easy to get all this information, use it to analyze the team, and see the current position of each club and their situational success. The next step requires the making of programs for all and individual spots on the team.

The evolution of success and the prediction of efficiency in any human activity is one of the most important tasks in sport science. In sport activities, situational success is getting more popular based on the factors which are influencingthe final score, and that can be seen on the example of young players. The starting point in the planning and programming of the training process should be detailed knowledge of biological predispositions, especially motor and anthropological factors in transformation process. The making of high-class handball players is a long and serious process, where knowledge of current needs and body deficiencies is needed for achieving success. Making corrections in late phases would be really difficult (in technical and tactical teaching), mainly due to the stabilization of the psychosomatic functions.

Situation efficiency gained from official statistics at some championship is very important so that the deficiencies of any team can be detected based on shots which were realized from different positions. This is important for coaches as guidelines of game improvement for upcoming games and competitions and at the same time for other team coaches as recognition of the deficits in some team which can be used to their advantage.

All authors in their studies maintain a basic division of players: goalkeepers, back players, wing players and pivot players. All these spots in the team demand specific preparations to build on the basic ones. This way of data processing represents a good example for defining current conditions, deficits in the situational success of the players and the team, all for the purpose of achieving high scores.

#### REFERENCES

- Alexandru, E., & Alexandru, A. (2009). The quantitative model of the finalizations in men's competitive handball and their efficiency. *Journal of Physical Education and Sport*, 24(3), 1-6.
- Bubalo, K. (2013). Analiza pokazatelja situacijske efikasnosti hrvatske ženske rukometne reprezentacije na Europskom prvenstvu u Švedskoj 2006. godine (Analysis of performance indicators of the Croatian national women handball team at the 2006 European championships in Sweden). Unpublished bachelor dissertation, Zagreb: Kineziološki fakultet Sveučilišta u Zagrebu.
- Calin, R. (2010). The analysis of the efficiency of using fast breaks in female handball during the World Championship in China, 2009. Science Movement and Health, 2, 594–599.
- Czerwinski, J. (2000). Statistical analysis and remarks on the game character based on the European Championship in Croatia. *EHF Periodical*, 2, 5-11.
- Demir, M., & Stanković, A. (2007). Kanonički odnos morfoloških dimenzija i situacijsko-motion sposobnosti s mladim rukometašima (Canonic relation between morphological dimensions and situational-motion abilities with young handball players). *Acta Kinesiologica*, 12, 54-58.
- Duda, H., Spieszny, M., & Tabor, R. (2009). The influence of conscious analysis of motor assignment on the efficiency of action of handball players. In: Spieszny, M. & Zdebska, H. (Eds.), Proceedings of the 13th International Scientific Society of Sport Games, Sport Games in the Light of Empirical Research (Handball). (pp. 42-50), Kraków-Wrocław.
- Foretić, N., Rogulj, N., & Papi, V. (2013). Empirical model for evaluating situational efficiency in top level handball. *International Journal of Performance Analysis in Sport*, 13(2), 275-293.
- Foretić, N., Rogulj, N., Srhoj, V., Burger, A., & Rajković, K. (2011). Differences in situation efficiency parameters between top men and woman handball teams. *Proceedings of the 1th EHF scientific conference Science and analytical expertise in handball* (pp. 243-247), Beč.
- Gruić, I., Vuleta, D., & Milanović, D. (2007). Performance indicators of teams at the 2003 men's World handball championship in Portugal. Kinesiology, 38(2), 164-175.
- Johansson, B., & Spate, D. (2004). Analysis of the Olympic Tournament (Men). World Handball Magazine, 3, 4-37
- Nićin, Đ., & Kalajdžić, J. (1996). Antropomotorika (Anthropomotorics). Novi Sad: FFK Novi Sad.
- Ohnjec, K., Grujić, I., & Vuleta, D. (2007). Analiza nekih pokazatlja situacijske efikasnosti Hrvatske ženske rukometne reprezentacije na Evropskom prvenstvu u Švedskoj 2006 godine (Analysis of some indicators of situational efficiency of the Croatian Women Handball National team on European Championship in Sweden in 2006. In N. Smajović (Ed), *Proceedings of the 2<sup>nd</sup> international conference New Technologies in Sport.* (pp. 128-132), Sarajevo.
- Ohnjec, K., Vuleta, D., Milanović, D., & Gruić, I. (2008). Performance indicators of teams at the 2003 World Handball Championship for women in Croatia. *Kinesiology*, 40(1), 69–79.
- Pavlovič, S., Talovič, M., Kazazovič, B., Kazazovič, E., & Lakota, R. (2013). Differences in Basic Motor and Situational Motor Abilities of Female Handball Players at Varying Levels of Competition. *Homo Sporticus*, 15 (1), 20-25.
- Perkovac, D., Vuleta, D., & Vuleta, V. (2009). Analiza pokazatelja situacijske efikasnosti hrvatske muške rukometne reprezentacije na 20. Svjetskom prvenstvu u Njemačkoj (Analysis of indicators of situational efficiency of Croatian men's handball team at the 20th World Cup in Germany). In B. Neljak (Ed), Proceedings of the 18<sup>th</sup> summer school of kinesiology of the Republic of CroatiaThe Methodological Organizational Forms of Work in the Fields of Education, Sport, Recreational Sport and kinesitherapy. (pp. 453-458), Zagreb: Hrvatski kineziološki savez.
- Rogulj, N. (2003). Učinkovitost taktičkih modela u rukometu (The efficiency of the tactics models in handball). Unpublished doctoral dissertation, Zagreb: Kineziološki fakultet Sveučilišta u Zagrebu.
- Rogulj, N., & Trnin, M. (2010). The influence of situation efficiency on the result of a handball. *Sport Science*, 3(2), 45-51.
- Sampaio, J., & Janeira, M. (2003). Statistical analyses of basketball team performance: understanding team's wins and losses according to a different index of ball possessions. *International Journal of Performance Analysis in Sport*. 3, 40-49.
- Srhoj, V., Rogulj, N., & Kati, R. (2001). Influence of the attack end conduction on match result in handball. Collegium Antropologicum, 25(2), 611–617.
- Srhoj, V. (2002). Situational Efficacy of Anthropomotor Types of Young Female Handball Players Coll. Collegium Antropologicum, 26(1), 211–218.
- Trninić, M., Papić, M., & Trninić, V. (2011). Hipotetički model faktora koji utiču na izvedbu i sportsko postignuće u timskim sportovima (Hypothetical model of factors determining performance and sports achievement in team sports). Fizička kultura, 65(2), 16-32.

- Vuleta, D. (2013). Analiza pokazatelja situacijske efikasnosti vanjskih igrača hrvatske rukometne reprezentacije na svjetskom prvenstvu u španjolskoj 2013 godine (Performance analysis of male handball players on the world championship in Spain 2013). In V. Findak (Ed), Organizacijski oblici rada u područjima edukacije, sporta, sportske rekreacije i kineziterapije. (pp. 306-313), Zagreb: Hrvatski kineziološki savez.
- Vuleta, D. (1997). Kineziološka analiza tehničko-taktičkih sadržaja rukometne igre. (Kinesiological analysis of technical-tactical contents of the game of handball). Unpublished doctoral dissertation, Zagreb: Kineziološki fakultet Sveučilišta u Zagrebu.
- Vuleta, D. (2013). Razlike u pokazateljima situacijske učinkovitosti vratarki pobjedničkih i poraženih ekipa na svjetskom rukometnom prvenstvu juniorki u Koreji (The difference in situation efficiency of goalkeepers in winning and losing teams at the World handball championship for junior women in Korea). Sport Mont, 37, 38, 39, 53-59.
- Vuleta, D., Majić, M., Vuleta, V., & Ohnjec, K. (2013). Analiza pokazatelja situacijske efikasnosti hrvatske rukometne reprezentacije U-18 na europskom prvenstvu u Crnoj Gori (Performance analysis of Croatian national team u -18 on the European championship in Montenegro). In I. Jukić, C. Gregov, S. Šalaj, L. Milanović, & V. Wertheimer, (Eds), Proceedings of the 11<sup>th</sup> annual international conference Conditioning Training of Athletes. (pp. 152-157). Zagreb: Kineziološki fakultet Sveučilišta u Zagrebu.
- Vuleta, D., Milanović, D., & Sertić, H. (2003) Utjecaj varijabli šutiranja na gol na konačan rezultat rukometnih utakmica Europskog prvenstvu 2000. godine (Relations among variables of shooting for a goal and outcomes of the 2000 Men's European Handball Championship matchs). *Kineziologija*, 35(2),168-183.
- Vuleta, D., Sporiš, G., Vulet, D., jr., Purgar, B., Herceg, Z., & Milanović, Z. (2012). Influence of attacking efficiency on the outcome of handball matches in the preliminary round of men's Olimpic games 2008. Sport Science, 5(2), 7-12.
- Vuleta, D., Ćurak, V., & Lovrić, V. (2011). Analiza pokazatelja sitaciske efikasnosti hrvatske rukometne reprezentacije na Svetskom prvenstvu 2009 u Hrvatskoj (Analysis of situation efficiency parameters of Croatia national team on the World Championship 2009. held in Croatia). In V. Findak (Ed), Proceedings of the 20th summer school of kinesiology of the Republic of Croatia. Diagnostics in the Fields of Education, Sport, Recreational Sport and Kinesitherapy. (pp. 384-390), Zagreb: Hrvatski kineziološki savez.
- Vurgun, H. (2010). New analysis programme suggestion given by means of the computerized environment to be able to evaluate the effect of understanding of fast play that has high technical effectiveness in handball to a match result. Unpublished doctoral dissertation, Izmir: Ege University.

# SITUACIONI USPEH U RUKOMETU: PREGLED

U rukometu se javlja veliki broj tipičnih i atipičnih situacija tokom igre, tako da je potrebno na objektivan način registrovati određene situacije, odnosno parameter situacione efikasnosti svakog igrača tokom meča, kao i situacione okolnosti. Tokom igre mogu se pribeležiti svi uspešni i neuspešni pokreti svakog igrača pojedinačno, na primer broj lopti usmerenih ka protivničkom golu, broj postignutih pogodaka, procenat realizovanih šuteva na gol, ukradenih lopti i slično. Tako se prikupljaju objektivni podaci o efikasnosti igrača. Parametri za procenu situacionog uspeha, prema pravilima, prikupljaju se tokom većih mečeva jer u tom slučaju već postoje ustaljene metode registracije određenih parametara tokom pojedinačnih mečeva tokom takmičenja (zvanična IHF ili EHF statistika). Cilj ovog istraživanja bio je da se prikupe i analiziraju radovi objavljeni u poslednjih 15 godina na temu situacione efikasnosti u rukometu, kako bi se odredila relevantnost prikupljenih podataka u pogledu uspeha u rukometu.

Ključne reči: rukomet, situacioni uspeh, trening