QUALITATIVE AND QUANTITATIVE ASSESSMENT OF COMPETITIVE ACTIVITY OF PROFESSIONALS IN MEDIUM AND HEAVY WEIGHT CATEGORIES

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Purpose. The purpose of research - in-depth study of the technical and tactical actions of boxers and to identify relationships between certain parameters of competitive activity. It was assumed that this study will bring the author to the construction of "perfect victory model" in a kickboxing match.

In other words, the research was carried out a detailed assessment of the competitive activities (CA) of professional sportsmen in medium and heavyweight categories in the qualitative and quantitative aspects as well as the identification of dependencies between those parameters.

To this end, it was selected the most experienced kickboxers-professionals with the highest number of matches for the 2014-2015.

Competitive activity was evaluated by the following parameters:

- URS – number of sportsmen punches (average per match);
- ONS – number of sportsmen kicks (average per match);
- URO – number of opponent punches (average per match);
- UNO - number of opponent kicks (average per match);
- PURS - percentage of “target reached” sportsmen punches*;
- PUNS - percentage of “target reached” sportsmen kicks
- PURO - percentage of “target reached” opponent punches;
- PUNO - percentage of target reached opponents kicks.

Besides that, *- the percentage of the total number of strikes.

Table 1 and 2 shows the CA parameters of athletes of medium and heavy weight categories. Also, in Fig. 1 and 2 shows the corresponding correlation diagram, calculated according to the criterion of Spearman.

Table 1. Features of strike interactions of professional athletes heavyweight (percentage and numerical characteristic)

Athlete	URS*	ONS*	URO*	UNO*	PURS	PUNS	PURO	PUNO
DINIZ	36,17	11,50	36,33	22,17	37	43	35	64
KHARITONOV	51,00	6,60	29,20	19,40	57	70	39	54
BONJASKY	20,00	37,67	31,83	24,33	27	55	27	65
BOUZIDI	19,29	18,14	26,71	11,86	34	50	32	52
SADDIK	19,71	11,57	19,43	12,71	29	60	38	58
ZIMMERMAN	25,50	5,25	22,50	16,50	40	40	36	52
SILVA	28,88	16,25	24,50	20,50	32	66	36	53
VERLINDEN	38,14	36,14	45,57	34,00	30	62	32	64
SCHILT	32,40	19,80	20,40	4,80	39	50	33	30
GHITA	29,44	10,44	27,11	9,89	38	52	44	57
SPONG	16,86	14,86	19,86	12,43	39	79	36	47
ILYNGA	43,14	27,57	42,71	16,00	32	60	37	49
VERHOEVEN	40,00	31,29	44,71	16,43	40	64	35	52
SAKI	27,00	12,86	17,71	15,71	37	49	31	47

Note. * - When calculating the indicators URS, ONS, URO, UNO took into account only the punches reach the goal.

Average values: URS - 30.53; ONS - 18.56; URO - 29.18; UNO - 16.09; PURS - 36.5; PUNS - 57.14; PURO - 35.07; PUNO - 53.14.

Table 2. Features of strike interactions of professional athletes middleweight (percentage and numerical characteristic)

Athlete	URS*	ONS*	URO*	UNO*	PURS	PUNS	PURO	PUNO
GROENHART	14,50	18,50	28,00	13,50	20	50	28	39
DANIELS	6,33	2,33	14,67	11,67	15	22	43	71
KRAUS	79,80	18,20	69,80	24,20	39	63	43	56
DAHLBECK	48,67	40,00	42,67	17,67	29	44	36	48
DE BONTE	13,67	18,67	14,00	16,33	29	54	26	49
KARAPETYAN	38,40	40,00	44,60	39,80	41	50	31	65
HOLLENBECK	49,75	31,75	20,75	6,00	47	70	34	46
VALTELLINI	52,80	42,60	42,80	20,20	36	76	31	52
AMBANG	33,17	17,50	17,00	17,50	42	58	31	63
KIRIA	47,50	16,38	40,75	38,38	24	47	28	55
PETROSYAN	28,33	24,83	26,50	16,50	23	54	22	58
HOLZKEN	62,33	31,17	55,67	28,83	38	55	31	48
RISTIE	35,86	18,00	26,14	18,43	34	52	32	49
VAN ROOSMALEN	47,00	32,90	32,50	33,10	33	65	21	52

Note. * - When calculating the indicators URS, ONS, URO, UNO took into account only the punches reach the goal.

Average values: URS – 39,86; ONS – 25,20; URO – 33,98; UNO – 21,57; PURS – 32,14; PUNS – 54,28; PURO –31,21; PUNO – 53,64.

Mathematical treatment carried out (according to the Mann-Whitney test and Speermen - value) revealed no statistically significant differences between the performance of athletes, heavyweights and middleweights athletes (62≤Uemp≤82 is in the insignificance area). The accuracy of athletes of different weight categories strokes (PURO, PURS, PUNS, PUNO) also differed slightly. The average number of accurate strikes (URS, URO, ONS and UNO) obtained by middleweight kickboxers appeared predictably higher than such numbers of heavyweight athletes.

Speaking about the heavyweight fighters, it is worth noting that the 54.5% of all hand punches and 63.6% of all leg kicks of sportsmen strikes more than their opponents. In 62.5% for both technique fighters strikes more than their opponents. In other words, for the heavyweight kickboxers, the number of strikes is not the main characteristic, leading to the sport win.

For heavyweight fighters number of accurate hand strikes (URS) was significantly correlated (Speerman's r>0,6) with the number of accurate hand strikes of the opponent (URO). Number of accurate kicks (ONS) of athlete negatively correlated with the percentage of punches that have achieved the target (PURO) (Speerman's r>0,5). URO is also positively correlated with the number of kicking an opponent (UNO).

For atheles of average weight categories URS index significantly correlated with indices of URO and PURS. Indicator PURS athletes middleweights positively correlated with the URS, and the PUNS (Speerman's r>0,6).

Conclusion. According to the research, number of accurate strikes is not defining condition to win in sport match. However, a heavyweight professional should be more accurate in leg technique than his opponent. In the combat technique of heavyweights hand technique is general. Hand strikes can change the course of the "hopeless" fights. Punches are often leads to a knockout, knockdown. In this way, boxing technique should be general strike technique in a kickboxing world.

Literature.

1. Shitov, V.L. (2007) Modern kickboxing. FAIR-PRESS, pp. 379-385.

2.Philimonov, V.I., Nigmedzyanov, A.A. (1999) Boxing, kickboxing, mortal combat. Phili-14. 416 p.

3. Sertic, H, Žaja, M., Segedi, I. (2014) Difference in importance of hand and leg techniques in the competitive kickboxing disciplines. Kinesiol. 2014, vol. 7. pp. 404–407.

4. Podoplelov, M.M. (2010) New approaches in training high-level boxers. Scientific-theoretical journal of Lesgaft. vol. 11(69). P. 66.

5. Muntean, V.S. (2007) Evaluation of the level of athletes in martial arts. Physical students training of creative disciplines. Vol6. P. 29.

6. Grishin A.A., Kolyada A.V., Zavyalov A.I. Biopedagogy in the preparation of athletes (2013). International Journal Of Applied And Fundamental Research. vol2. URL: www.science-sd.com/455-24247 (26.09.2015).