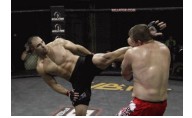


Evaluation of Technical, Tactical and Conditional Competitive Loads in Professional MMA Mixed Martial Arts Fighters

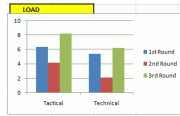
Lloret-Arredondo, R. and Ribera-Nebot, D. (2011) · Barcelona University and Institute of High Performance Center (Barcelona, Spain)



EVALUATION OF TECHNICAL, TACTICAL AND CONDITIONAL COMPETITIVE LOADS IN PROFESSIONAL MMA MIXED MARTIAL ARTS FIGHTERS

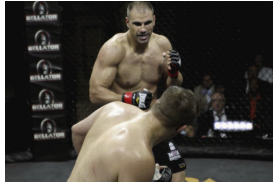
Introduction

Recording maximum reliable information on changes in an athlete during the training process and competition - control and evaluation, respectively (Seirul-lo, 1998) – is the main principle of the design of training monitoring (Viru, 2004).



Purpose

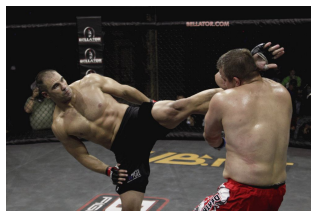
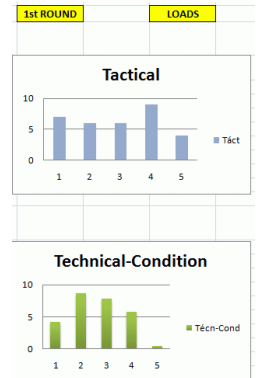
The aim of this study was to integrate the evaluation of technical, tactical and conditional competitive loads in one of the professional MMA fights of the Bellator 25 Fighting Championship 2010 held in Chicago.



Methods

In every minute and in every of the three 5-minute rounds of the fight the following parameters were evaluated for each fighter: a) tactical load (based on the difficulty of making decisions - assessed 1 to 10 by expertise judgment), b) technical-conditioning load (based on the quality, scored 1 to 10 by expertise judgment, and number of effective actions, scored 1 point for each 10 points of quality –global assessed 1 to 10), c) sum of qualities of effective actions, d) auto-evaluation by the fighter and coaches of technical-tactical execution qualities, strategies, fatigue states and psychological effectiveness. For each of the three rounds and for the total fight the tactical load (mean of each minute and round), technical load (mean of each minute and round), the conditional load (sum of the technical-conditioning load of each minute and round) were evaluated.

DRN		EVALUATION											LOAD				
R.LL / K.C. - 19 Aug '10 - Bellator 25 - Chicago		NUMBER OF EFFECTIVE ACTIONS											LOAD				
		STANDING											Tactical				
		ON THE FLOOR											Technical				
													Condition				
TR	30"	Distance	Kick	Punch	Body	Body-Body	Scape	knock down	Head	Trunk	Body	Scape	Dislocation	Strangulation	Tactical	Technical	Condition
1	30"	R.LL	1	1	2	0	0	0	0	0	0	0	0	0	7	4,2	27
	30"	C.K.	0	1	2	0	0	1	5	19	23	0	0	0	5,4	2,1	10,7
2	30"	R.LL	4	4	3	1	1	0	0	0	0	1	0	0	6	8,2	31,3
	30"	C.K.	0	1	0	0	0	13	0	0	0	6	5	6	6,3	3,3	31,3
3	30"	R.LL	7	5	5	2,5	1	13	9	0	10,5	5	6	0	4	6,5	69,00
	30"	C.K.	0	1	0	0	1	19	32	27	0	2	1	0	4,60	69,00	69,00

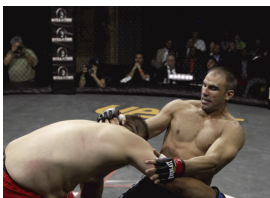


		NUMBER OF EFFECTIVE ACTIONS												
		STANDING												
		ON THE FLOOR												
		Distance	Kick	Punch	Body	Body-Body	Scape	knock down	Head	Trunk	Body	Scape	Dislocation	Strangulation
1st	R.LL	2	1	2	1,5	0	0	0	9	0	3,5	0	0	0
	C.K.	0	1	2	0	1	5	19	23	0	0	0	0	0
2nd	R.LL	4	4	3	1	1	0	0	0	0	1	0	0	0
	C.K.	0	1	0	0	0	13	0	0	0	6	5	6	0
3rd	R.LL	7	5	5	2,5	1	13	9	0	10,5	5	6	0	0
	C.K.	0	1	0	0	1	19	32	27	0	2	1	0	0
GLC	R.LL	7	5	5	2,5	1	13	9	0	10,5	5	6	0	0
	C.K.	0	1	0	0	1	19	32	27	0	2	1	0	0

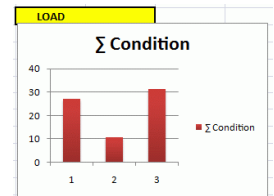
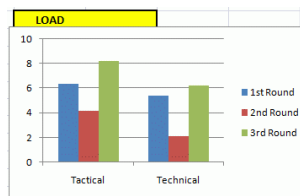
		SUM OF QUALITIES OF EFFECTIVE ACTIONS ("PAIN DONE")					
		1'	2'	3'	4'	5'	Tot.
1st	R.LL	24	16	28	38	3	109
	C.K.	46	125	101	42	2	316
2nd	R.LL	2	9	9	12	13	45
	C.K.	3	3	21	15	42	84
3rd	R.LL	9	24	24	21	16	94
	C.K.	36	52	42	50	55	235
GLC	R.LL	35	49	61	71	32	248
	C.K.	85	180	164	107	99	635

Results

The sum of qualities of effective actions for RLL and CK fighters in rounds 1, 2, 3 and total fight, respectively, are 109/316, 45/84, 94/235 and 208/546. The tactical, technical and conditional loads for RLL fighter in rounds 1, 2, 3 and total fight, respectively, are 6.4, 4.2, 8.2 and 6.27 (tactical load), 5.4, 2.1, 6.3 and 4.6 (technical load), and 27, 10.7, 31.3 and 69 (conditional load).



		LOAD		
		Tactical	Technical	Σ Condition
1st Round		6,4	5,4	27
2nd Round		4,2	2,1	10,7
3rd Round		8,2	6,3	31,3
TOTAL		6,27	4,60	69,00



CONCLUSIONS

The integration of the evaluation of tactical, technical and conditioning competitive loads in professional MMA fighters is effective to help the coach in training guide and making necessary changes in training design. In order to improve the effectiveness in competition, the most relevant analysis is the auto-evaluation of the fighter and coaches. This methodology to evaluate competition is applied to many other martial arts fighters.

References

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