

Dynamics of indicators of competitive activity of highly qualified wrestlers

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Purpose: to trace the dynamics of competitive performance indicators of highly qualified wrestlers.

Material & Methods: the following methods were used in the study: analysis of scientific and methodological information, generalization of best practices, analysis of protocols and videos of the final fights of highly qualified Greco-Roman style wrestlers at the world championships 2017, 2018, 2019; methods of mathematical statistics. In total, an analysis was made of 81 final duel of athletes (wrestling for first and third places).

Results: analysis of the competitive activity of highly qualified wrestlers at the world championships 2017, 2018, 2019 allowed us to identify 11 basic technical actions that are most often used: handspring, handspring with a hand and head grip, tackles with a back belt, back belt, counter-measures in the standing and mat, transfers to the mat, tackles with a twist and a deflection, suplex, pushing over the carpet. It was determined that at the World Championships 2017, 2018, 2019, the most performed technical actions in the stalls are handspring, and in the standing – dumping and pushing an opponent out of the carpet.

Conclusions: it was found that during the study period, the effectiveness of attacks in the standing and mat, the effectiveness of the standing and mat have dynamics to improve, which positively affects the entertainment of Greco-Roman wrestling. The average bout time is reduced from 354 seconds at the 2017 World Cup to 273 seconds at the 2019 World Cup. Such a distribution of time shows that the number of fights won ahead of schedule in wrestlers increased.

Keywords: competitive activity, indicators, Greco-Roman wrestling, highly qualified athletes.

Introduction

Every year, competition is intensifying in the struggle for prizes in international competitions in Greco-Roman wrestling. This is due to ever-increasing competition on the basis of introducing the achievements of science and technology into the training process and improving the methodology of training athletes [2; 10].

Analyzing the development trend of wrestling in recent years, most experts agree that for the development of wrestling, including as part of the program of the Olympic Games, efforts must be made to increase the effectiveness of wrestling fights while maintaining a high intensity of wrestling throughout the fight [1; 6].

The level of technical and tactical actions (TTA) of an athlete mainly determines his success in a duel. Scientific and methodological support for the training of highly qualified wrestlers requires, first of all, the selection of the most effective technical and technical specifications and their further improvement. This is due to the fact that the composition and structure of effective TTA are rapidly changing in sports practice. Therefore, for the training of high-class athletes, it is important to inform wrestlers and coaches in a timely manner about the promising areas of wrestling development. At the same time, the analysis of the competitive activity of the leading wrestlers of our time is relevant [4; 5; 9].

Purpose of the study: to trace the dynamics of indicators of competitive activity of highly qualified wrestlers.

Material and Methods of the research

The following methods were used to solve the research problems: analysis of scientific and methodological information, generalization of best practices, analysis of protocols and videos of the final fights (struggle for first and third places)

of highly qualified Greco-Roman style wrestlers at the world championships 2017, 2018, 2019. In total, an analysis of 81 final duel of athletes was carried out, the following indicators were recorded in them: fights duration (fights time); all technical actions carried out by wrestlers in fights (the number of technical actions); real attempts (the number of realized attempts to complete the throw); evaluated attempts (number of attacks implemented); the effectiveness of the equipment used in the standing and ground (determined by dividing the number of successful attacks in the number of real attempts to complete the reception and multiplied by 100%); the effectiveness of defense in the standing and ground (determined by dividing the number of reflected attacks by the number of real attempts to complete the reception and multiplied by 100%); the effectiveness of the equipment used in the stance and stalls (evaluated in points: 1, 2, 4, 5 points).

The method of mathematical statistics was used to qualitatively study the results of studies and establish statistical laws.

Results of the research

Based on the analysis of scientific and methodological information and a synthesis of best practices, it was found that successful training of athletes of any level is impossible without careful consideration of the main trends in the development of wrestling, which can be established with sufficient accuracy when analyzing the structural components of the competitive activity of high-class wrestlers [3; 6; 7].

An analysis of the competitive activity of highly qualified wrestlers at the World Championships (World Cups) 2017, 2018, 2019 allowed us to identify 11 main technical actions (TA) that are most often used: roll-overs, flying mare, throws with a back belt, back belt, counter-hold in the standing and ground, takedown, sacrifice throw, suplex, stalling, pushing

Table 1
Analysis of the technical preparedness of highly qualified Greco-Roman style wrestlers at the World Championships

No.	Technical actions, quantity	WC-2017 (23 match)		WC-2018 (29 match)		WC-2019 (29 match)	
		Σ	%	Σ	%	Σ	%
Ground:							
1.	Roll-overs	3	12,6	9	20,5	17	24,6
2.	Flying mare	1	4,1	2	4,5	11	15,9
3.	Throws with a back belt	1	4,1	8	18,2	4	5,8
4.	Back belt	–	–	1	2,3	1	1,5
5.	Counter-hold	–	–	1	2,3	1	1,5
Total I on the ground:		5	20,8	23	52,3	35	50,7
Standing:							
6.	Takedown	2	8,3	3	6,8	8	11,6
7.	Sacrifice throw	1	4,1	4	9,1	1	1,5
8.	Suplex	2	8,3	2	4,5	4	5,8
9.	Stalling e	6	25,1	5	11,4	9	13,0
10.	Pushing behind the carpet	7	29,3	4	9,1	7	10,2
11.	Counter-hold	1	4,1	3	6,8	5	7,2
Total on the standing:		19	79,2	21	47,7	34	49,3
Total in standing and ground:		24	100	44	100	69	100

Table 2
Performance indicators of highly qualified Greco-Roman style wrestlers at World Championships

No.	Indicators	WC-2017 (23 match)	WC-2018 (29 match)	WC-2019 (29 match)
1.	Attack efficiency in the standing,%	37	47	59
2.	Attack efficiency in ground,%	42	46	48
3.	The effectiveness of protection in the standing,%	87	91	89
4.	The effectiveness of protection in the ground,%	60	72	61
5.	Performance in the rack, points	2,91	3,00	3,79
6.	Performance on the ground, points	0,96	2,07	2,52
7.	Average fight time, s	354	299	273

behind the carpet (Table 1). These TA can be considered the main in modern Greco-Roman wrestling.

It was established that at all the studied world championships the most performed TA in the stalls are sacrifice throw, and in the stance - various options for stalling and pushing an

opponent out of the carpet (Table 1).

An analysis of competitive activity at the World Championships showed that high-class wrestlers conduct an equal number of TA in the standing and ground, except for the 2017 World Cup, on which more TA in the ground were performed, this is explained by the changes to the rules of the competition (Figure 1).

An analysis of Table 2 made it possible to determine that during the study period, the effectiveness of attacks in the standing and ground, and the effectiveness of standing and ground have a dynamic of improvement, which positively affects the entertainment of Greco-Roman wrestling. The effectiveness of defense in the standing is high: it was 87% at the 2017 World Cup, 91% at the 2018 World Cup and 89% at the 2019 World Cup. The effectiveness of protection in the stalls is average: 60% at the 2017 World Cup, 72% at the 2018 World Cup and 61% at the 2019 World Cup.

The average fight time is reduced from 354 s at the 2017 World Cup to 273 s at the 2019 World Cup. Such a distribution of time indicates that wrestlers increased the number of prematurely won fights and fights became more interesting for the viewer (Figure 2).

The data obtained indicate the importance of technical and tactical preparedness of athletes as a factor determin-

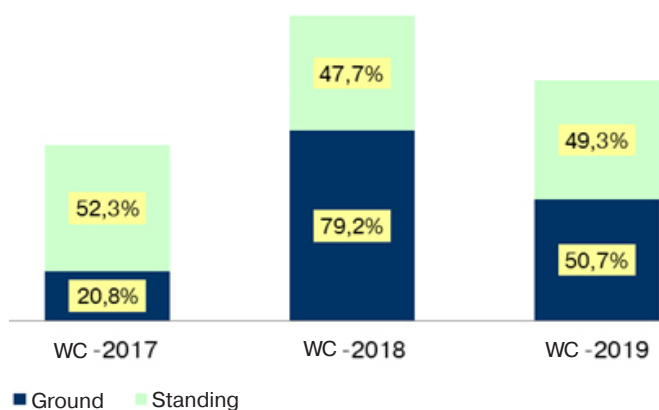


Fig. 1. The dynamics of the ratio of technical actions in the standing and ground at the World Championships (World Cup)

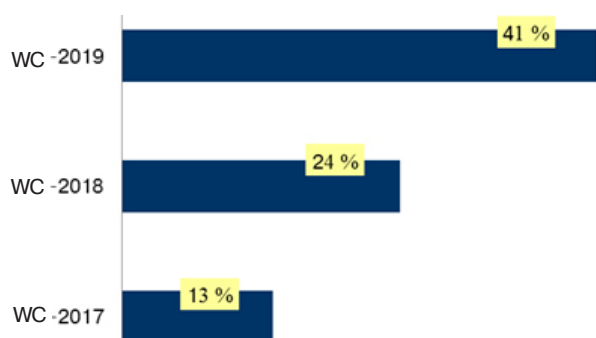


Fig. 2. Dynamics of prematurely won fights at the World Championships (World Cup)

ing success in various types of wrestling. This is also confirmed by the results of studies presented in scientific papers. (Apoiko, P. H., 2015; Tropin, Y. and et. al., 2018; Тьннеманн, H., 2016).

Conclusions / Discussion

Analysis of performances at the competitions is of great importance: by analyzing the competitive activity, the effectiveness of the technical and tactical actions of highly qualified Greco-Roman style wrestlers according to the rules of 2018

was determined (Abulkhanov, A.N., Borisov, I.P., 2018), individual tactical and technical skill of highly qualified wrestlers (Ivanyuzhenkov, B.V., Nelyubin, V.V., 2005), the performances of judo athletes of different age groups were tracked (Julio, U. and et. al., 2011). Analysis is also carried out for different types of wrestling: based on the performance of athletes at the 2017 World Cup, a comparative analysis of the strongest and Ukrainian Greco-Roman wrestlers was carried out (Radchenko, Y. and et. al., 2018), similar studies were conducted in freestyle wrestling (Boyko, V.F. et al., 2014) and women's wrestling (Latyshev, N.V. et al., 2019).

It was established that at the World Championships 2017, 2018, 2019, the most performed technical actions in the standing are sacrifice throw, and in the ground – dumping and pushing an opponent out of the carpet.

Over the study period, the effectiveness of attacks in the stance and stalls, the effectiveness of the standing and ground have a dynamic of improvement, which positively affects the entertainment of Greco-Roman wrestling. The average fight time is reduced from 354 seconds at the 2017 World Cup to 273 seconds at the 2019 World Cup. This distribution of time indicates that wrestlers have increased the number of prematurely won fights.

Prospects for further research will be directed to the development of training tasks for Greco-Roman style wrestlers taking into account the requirements of modern competitive activity.

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