

SCORING ANALYSIS OF THE SENIOR WORLD WRESTLING CHAMPIONSHIPS-2017

David López



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SCORING ANALYSIS OF THE SENIOR WORLD WRESTLING CHAMPIONSHIPS-2017

David López
decodingwrestling@gmail.com

Introduction

To breakdown the scoring made by participants during Senior World Championships 2017, held in Paris, France, from August, 2017, in all three styles-Greco Roman, Women's Freestyle and Men's Freestyle. The present report follows the key features from reporting style and wrestlers' performance descriptors established by Dr. Harold Tünnemann during the last 2 decades. Some new indicators were added to expand the scope of data. Tools used for analyzing and describing scoring events were the official videos of the championships and Dartfish Team Pro 9 Video Analysis Software.

Methods of Analysis

Scoring events awarded with technical points during the tournament were classified, notating the following features:

Type of Scoring Event	Minute when the event was done	Scoring value	Technical Group	Strategic Role
Technical moves: <input type="checkbox"/> Standing moves <input type="checkbox"/> Par-terre moves Penalizations: <input type="checkbox"/> Passivities <input type="checkbox"/> Cautions <input type="checkbox"/> Lost Challenges	<input type="checkbox"/> Ranging from 1st to 6th minute	<input type="checkbox"/> 1 point <input type="checkbox"/> 2 points <input type="checkbox"/> 4 points <input type="checkbox"/> 5 points	Standing moves: <input type="checkbox"/> Leg attacks <input type="checkbox"/> Takedowns <input type="checkbox"/> Throws & Shifts <input type="checkbox"/> Step outs <input type="checkbox"/> Blockages Par-terre moves: <input type="checkbox"/> Turn-overs <input type="checkbox"/> Spins <input type="checkbox"/> Lifts <input type="checkbox"/> Reversals <input type="checkbox"/> Blockages	All technical moves: <input type="checkbox"/> Attack <input type="checkbox"/> Counterattack

Additionally, total time on the mat by wrestlers and teams was recorded as decimal minutes (example: 20 min 30 sec. equals 20.5 minutes) to normalize wrestlers' activity by dividing scored and lost points by time spent on the mat.

GRECO ROMAN WRESTLING


































The 301 bouts held by the 260 competitors representing 54 national teams who took part of the tournament were analyzed. 1250 scoring events awarded with technical points during the tournament.






















GRECO-ROMAN SPECIFIC FEATURES

Due to its evident technical and tactical differences caused by its specific rules set, to analyze Greco- Roman performances were also notated and analyzed the following data:


































- DISTANCE (from every technical move on standing, if the move started from a HOOKING or HAND-FIGHTING situation)
- PRECEDENT SITUATION (classification of the scoring situation which preceded a tech. points reward: a previous passivity, a technical move, or a penalization due to rules violation or a lost challenge point. If the situation assessed was the first one of the bout, it was notated as "First scoring event").
- WRESTLER PENALIZED WITH A PASSIVITY POINT (for every passivity point it was notated who was the passive wrestler: the wrestler who was winning the bout or who was losing it. If the call was the first scoring event of the bout, was notated as "First Scoring Event").
- WAY TO WIN (for every match, it was described if someone scored at least one standing attacking move during the match, if only counterattacking moves were registered, or if not a single technical move was seen. NOTE: Step-Outs were NOT considered as "technical moves").






















PARTICIPANTS BY TEAM AND WEIGHT CATEGORY

	Teams	71 kg	80 kg	85 kg	75 kg	59 kg	66 kg	98 kg	130 kg	TOTAL
1	 ALG	1	1	1	0	0	0	0	0	3
2	 ARG	0	0	0	1	0	0	0	0	1
3	 ARM	1	1	1	1	1	1	0	0	6
4	 AUT	1	1	1	0	0	0	1	0	4
5	 AZE	1	1	1	1	1	1	1	0	7
6	 BLR	0	1	1	1	1	1	1	1	7
7	 BRA	1	0	0	1	0	1	0	0	3
8	 BUL	1	1	0	0	1	1	1	1	6
9	 CAN	0	0	0	0	0	0	1	0	1
10	 CHI	0	0	0	0	1	0	0	1	2
11	 CHN	1	1	1	1	1	1	1	1	8
12	 COL	1	0	1	0	1	0	0	0	3
13	 CRO	0	1	1	0	1	1	0	0	4
14	 CUB	0	0	1	1	0	1	1	1	5
15	 CZE	1	1	0	1	0	1	1	0	5
16	 DEN	0	1	0	1	0	1	0	0	3
17	 DOM	1	1	0	0	1	0	0	0	3
18	 EGY	1	0	1	1	1	1	0	1	6
19	 ESP	1	0	0	0	0	0	0	0	1
20	 EST	0	0	1	0	0	0	1	1	3
21	 FIN	0	0	0	1	0	0	1	1	3
22	 FRA	1	1	1	1	1	1	1	1	8
23	 GEO	1	1	1	1	1	1	1	1	8
24	 GER	1	1	1	1	1	1	1	1	8
25	 GRE	0	0	0	1	0	1	1	1	4
26	 HON	1	0	0	0	0	0	1	0	2
27	 HUN	0	1	0	1	1	1	0	1	5
28	 IND	1	1	1	1	1	1	1	1	8
29	 IRI	1	1	1	1	1	1	1	1	8
30	 ITA	1	0	1	0	0	0	0	0	2
31	 JPN	1	1	1	1	1	1	1	1	8
32	 KAZ	1	1	1	1	1	1	1	0	7
33	 KGZ	1	1	1	1	1	1	1	1	8

Teams		71 kg	80 kg	85 kg	75 kg	59 kg	66 kg	98 kg	130 kg	TOTAL
34	 KOR	1	1	1	0	1	1	1	1	7
35	 LAT	1	0	0	0	0	1	0	0	2
36	 LTU	0	0	1	1	1	1	1	1	6
37	 MAR	0	1	0	1	0	0	1	0	3
38	 MDA	1	0	0	0	1	1	0	0	3
39	 NOR	1	0	0	0	0	0	1	0	2
40	 PER	0	0	1	0	0	1	0	0	2
41	 PLE	0	0	0	1	0	0	0	0	1
42	 POL	1	0	1	1	1	1	1	0	6
43	 PRK	0	0	0	0	1	0	0	0	1
44	 ROU	1	0	1	1	0	0	0	1	4
45	 RUS	1	1	0	1	1	0	1	1	6
46	 SRB	0	1	1	1	0	1	1	0	5
47	 SUI	0	0	0	1	0	1	0	0	2
48	 SVK	1	0	0	0	0	0	0	1	2
49	 SWE	1	1	1	1	0	1	0	0	5
50	 TPE	0	0	1	0	0	1	0	0	2
51	 TUR	1	0	1	1	1	1	1	0	6
52	 UKR	1	1	1	1	1	1	1	1	8
53	 USA	1	1	1	1	1	1	1	1	8
54	 UZB	1	0	0	0	1	1	1	1	5
	TOTAL	37	29	34	34	30	36	33	27	260

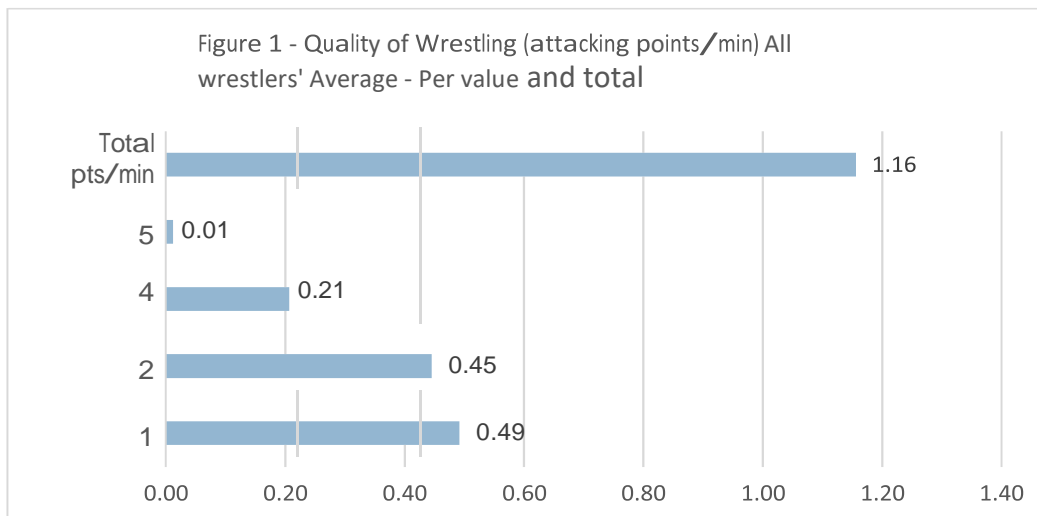
SENIORS GRECO-ROMAN WRESTLING TEAM RANKING (Classification Points by Weight Class)

	Teams	71 kg	80 kg	85 kg	75 kg	59 kg	66 kg	98 kg	130 kg	TOTAL
1	 ALG	1	1	1	0	0	0	0	0	3
2	 ARG	0	0	0	1	0	0	0	0	1
3	 ARM	1	1	1	1	1	1	0	0	6
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5	 AZE	1	1	1	1	1	1	1	0	7
6	 BLR	0	1	1	1	1	1	1	1	7
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19	 ESP	1	0	0	0	0	0	0	0	1
20	 EST	0	0	1	0	0	0	1	1	3
21	 FIN	0	0	0	1	0	0	1	1	3
22	 FRA	1	1	1	1	1	1	1	1	8
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25	 GRE	0	0	0	1	0	1	1	1	4
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27	 HUN	0	1	0	1	1	1	0	1	5
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32	 KAZ	1	1	1	1	1	1	1	0	7
33	 KGZ	1	1	1	1	1	1	1	1	8

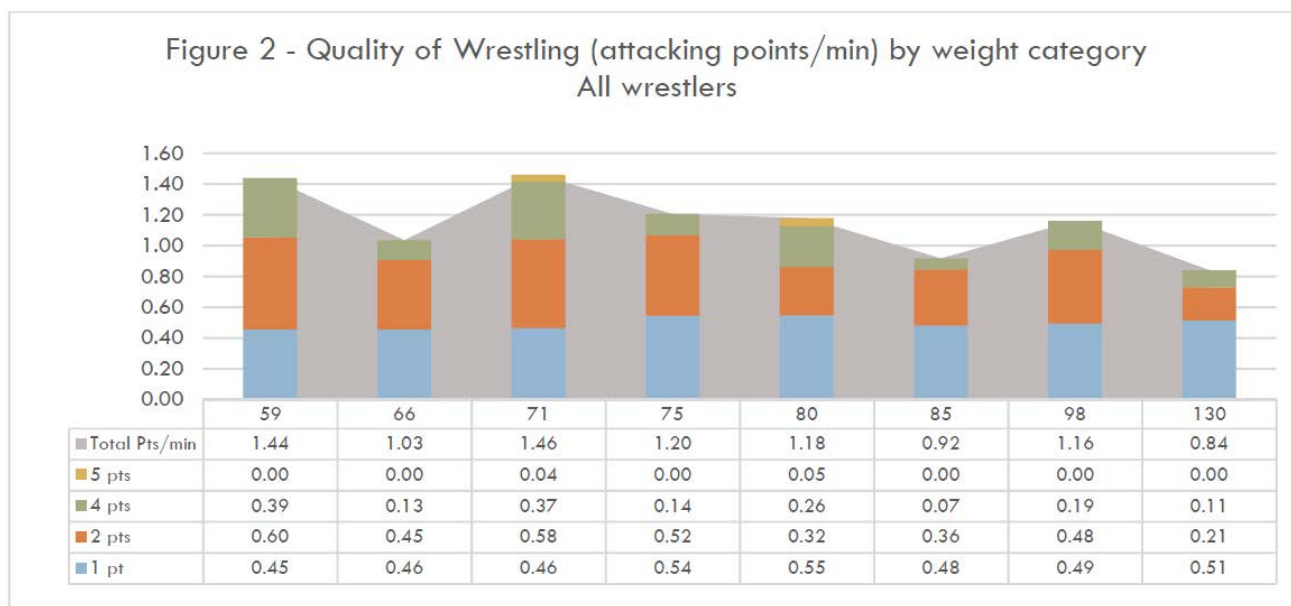
Teams		71 kg	80 kg	85 kg	75 kg	59 kg	66 kg	98 kg	130 kg	TOTAL
34	 KOR	1	1	1	0	1	1	1	1	7
35	 LAT	1	0	0	0	0	1	0	0	2
36	 LTU	0	0	1	1	1	1	1	1	6
37	 MAR	0	1	0	1	0	0	1	0	3
38	 MDA	1	0	0	0	1	1	0	0	3
39	 NOR	1	0	0	0	0	0	1	0	2
40	 PER	0	0	1	0	0	1	0	0	2
41	 PLE	0	0	0	1	0	0	0	0	1
42	 POL	1	0	1	1	1	1	1	0	6
43	 PRK	0	0	0	0	1	0	0	0	1
44	 ROU	1	0	1	1	0	0	0	1	4
45	 RUS	1	1	0	1	1	0	1	1	6
46	 SRB	0	1	1	1	0	1	1	0	5
47	 SUI	0	0	0	1	0	1	0	0	2
48	 SVK	1	0	0	0	0	0	0	1	2
49	 SWE	1	1	1	1	0	1	0	0	5
50	 TPE	0	0	1	0	0	1	0	0	2
51	 TUR	1	0	1	1	1	1	1	0	6
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54	 UZB	1	0	0	0	1	1	1	1	5
	TOTAL	37	29	34	34	30	36	33	27	260

SCORING BREAKDOWN, ALL WRESTLERS

Quality of Wrestling



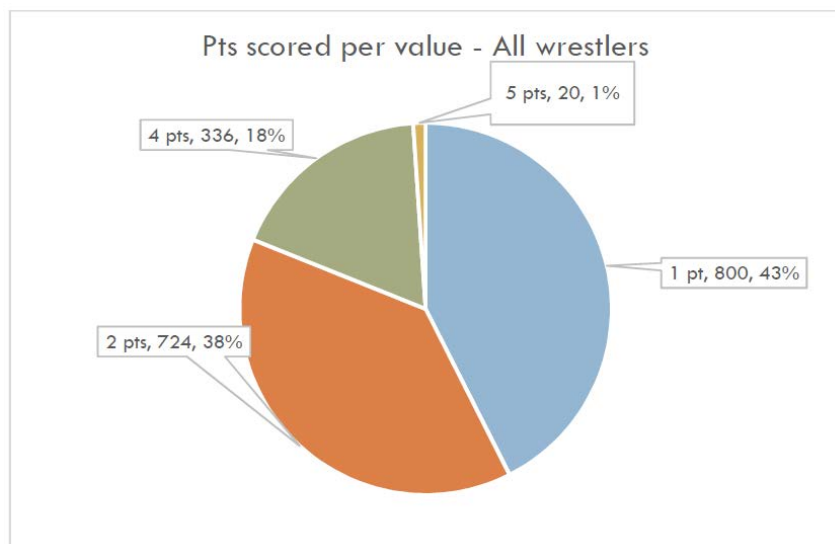
Quality of Wrestling by Weight Category



Highlights

- Quality of Wrestling value reached by all Greco-Roman competitors was 1.16 pts/m.
- 0.49 pts/m were obtained due to 1 point value situations (either step outs, Passivities or lost challenges). Contribution of 4 points value actions was lower than the 25% of the total scoring.
- By weight class, 59kg, and 71kg surpassed 1.4 pts/m. The higher performances scoring due to 4 points actions were seen in those same weight classes. 5 pts actions were infrequently executed.
- The lowest quality of wrestling was found in 85kg and 130kg.

Points scored per value – Total and Percentage



Highlights

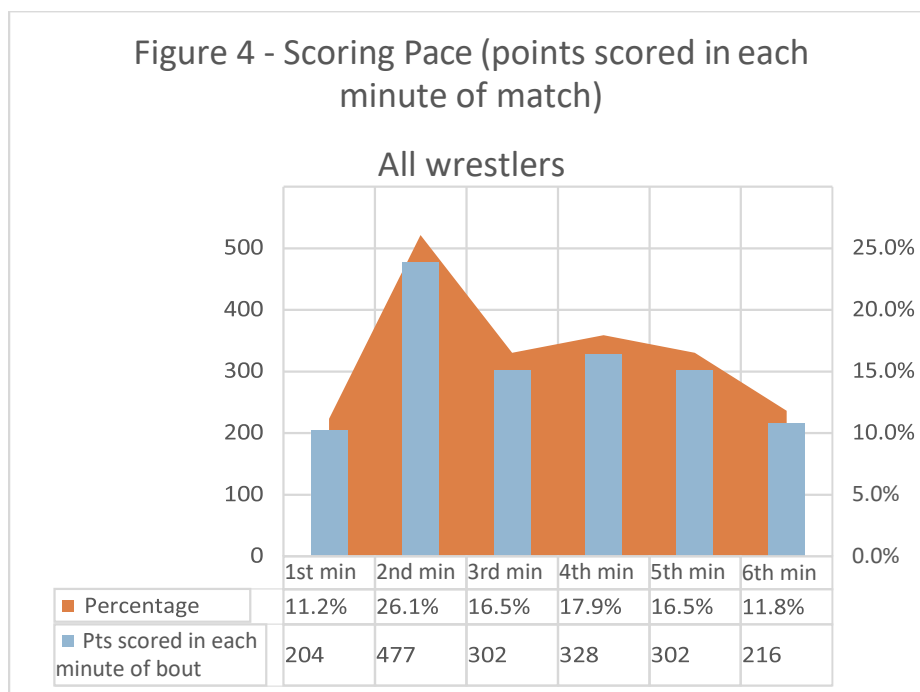
- 1865 tech. pts. were scored by all Greco wrestlers.
- 4 pts. actions reached less than 20% of the total scoring.
- Only 1% of the total scoring were obtained by 5 points moves.

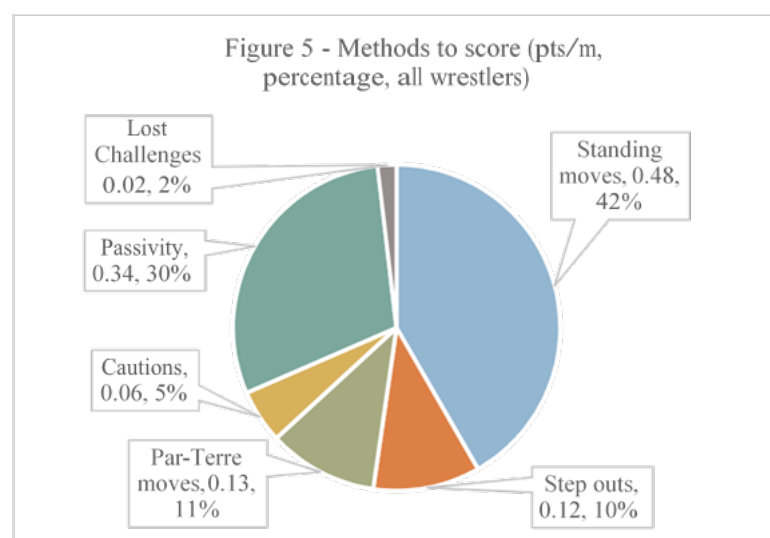
Scoring pace - Points scored minute by minute.

Highlights

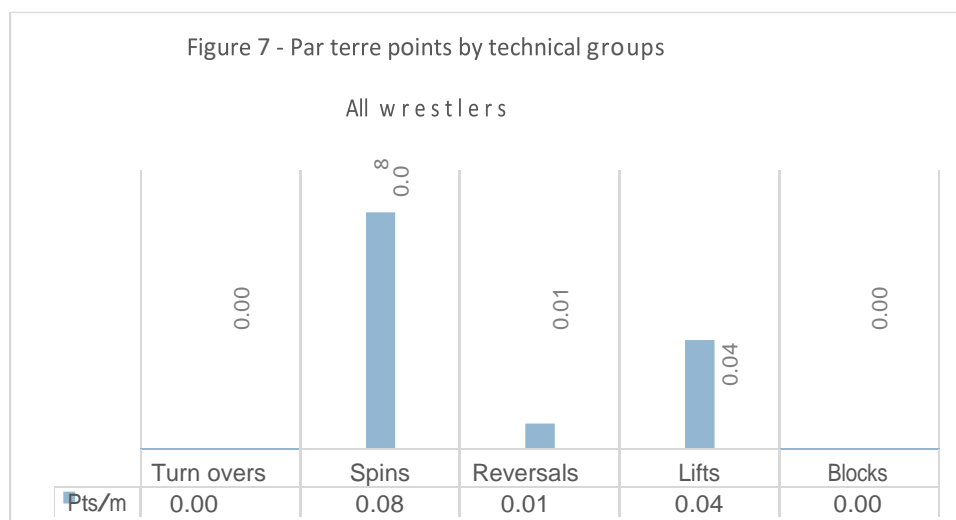
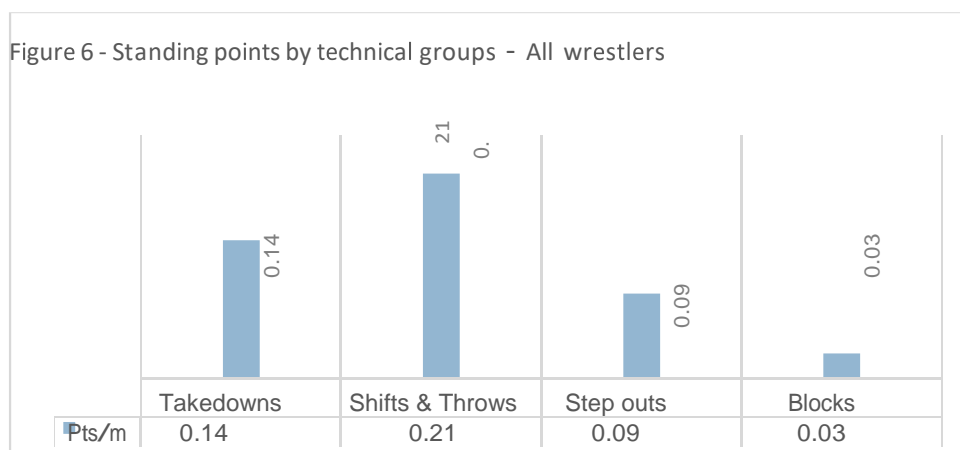
- Second minute of match registered the highest scoring percentage of, which could be explained by the activity encouraging rules.
- Scoring pace was relatively constant all along matches, ranging from 11% to 26% per minute.

Figure 4 - Scoring Pace (points scored in each minute of match)





Breakdown of Scoring by Technical Groups



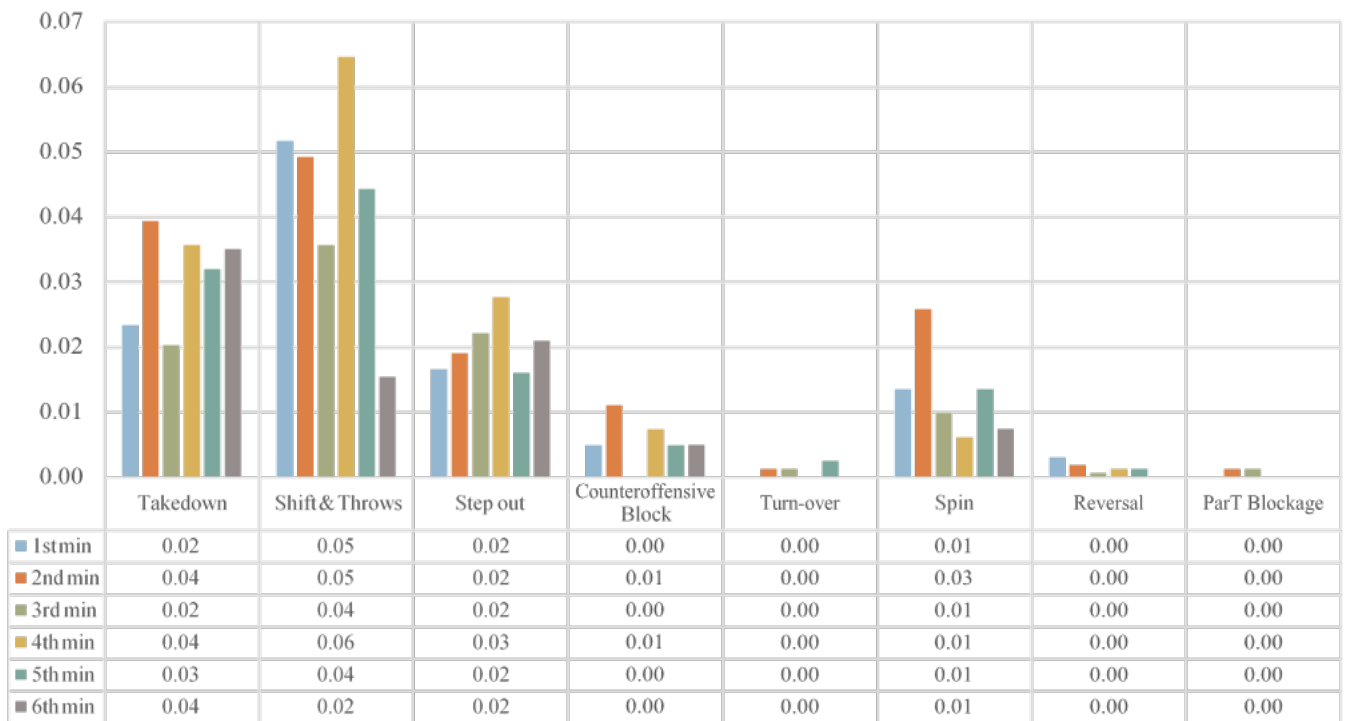
Highlights

- The Greco-Roman rules in force for this event did not reward active wrestler with ordered par-terre, Standing moves were the most used method to score (42%). Nevertheless, together with Par-Terre moves (11%), technical actions represent barely above 50% of the total scoring.
- Penalizations (cautions, lost challenges and passivities) and step-outs were the non-technical methods.

Highlights

- Shifts & Throws were the most used moves to score, followed by Takedowns and Counteroffensive blocks in standing.
- Not a surprise that Spins (gut wrenches, etc.) and Lifts were the most common moves in par-terre.
- Regarding the values per minute, must be pointed that those were quite low. To illustrate, the highest one, 0.21 pts/m (Shifts & Throws) is equal to one 4 point move every 20 min of bout.

Figure 8 - Points scored by Technical Moves minute byminute GR,
All Wrestlers



Highlights

- More takedowns were scored during second periods. In first periods, most takedowns were executed during 2nd minute.
- Shift and Throws were executed with higher frequency during first minute of every period, decreasing its frequency along the 3 min. length.
- Despite step outs frequency being lower than actual techniques in standing, their execution increased along the first four minutes of matches.
- Gut wrench frequency was greater during first periods, mostly during second minute.

Points scored by Strategy (attack and counterattack moves)

Figure 9 - Points scored by strategy - Standing

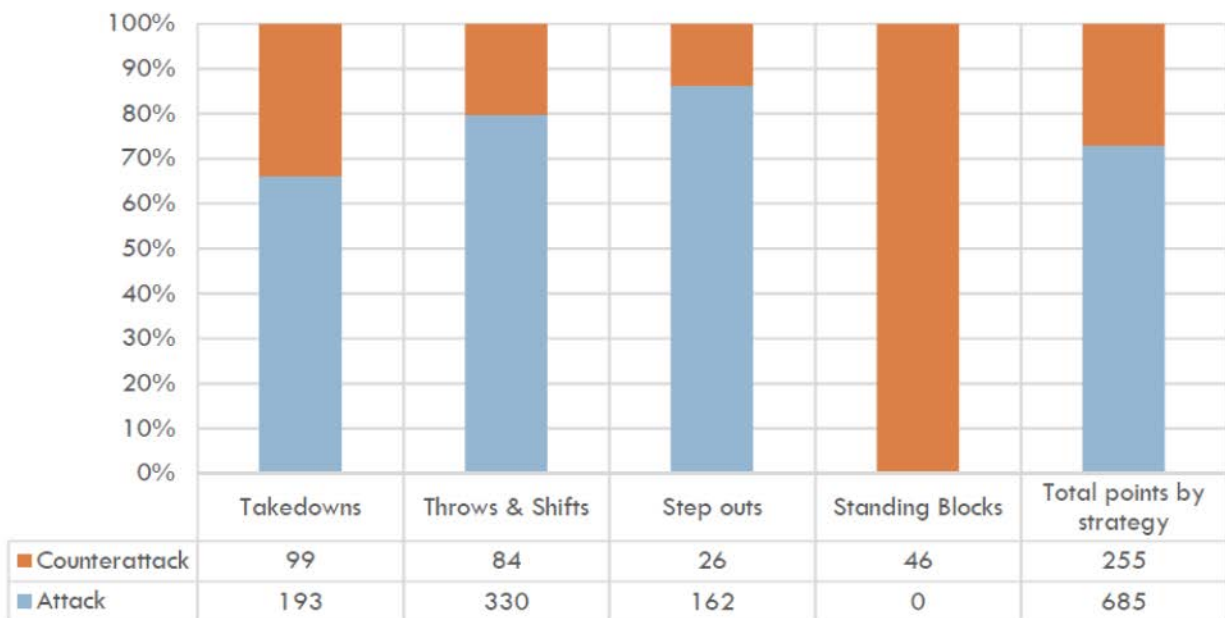


Figure 10 - Points scored by strategy - Par terre

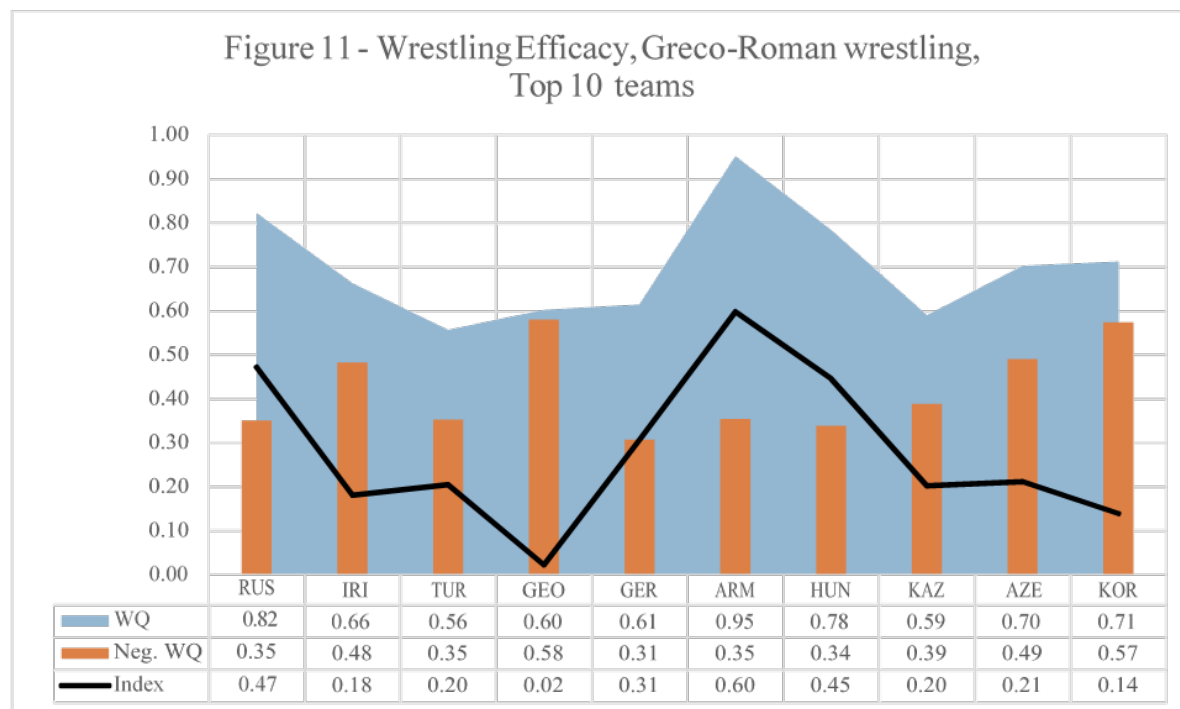


Highlights

- Attack strategies represented more than 70% of the total scoring in standing.
- In par-terre, attack strategy reached almost 90%.
- Turn over moves in Greco-Roman wrestling were not barely seen, but 2 of the only three done were counterattacks.

PERFORMANCE OF TOP 10 TEAMS

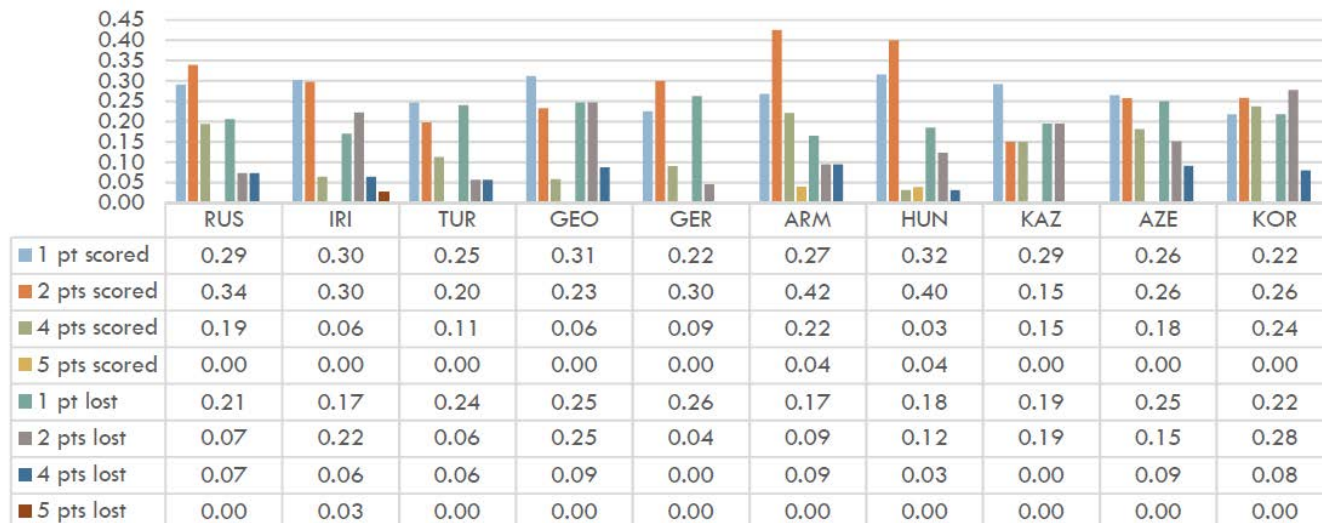
Wrestling Efficacy (Wrestling Quality, Defense Stability, Efficacy Index)



Highlights

- The difference between points scored per minute on the mat (Wrestling Quality or WQ) and Points lost per minute on mat (Defense Stability or neg. WQ) results in an Efficacy Index. The higher the gap between WQ and neg. WQ, the higher and better efficacy index (Tünnemann, 2016).
- The highest Efficacy Index was reached by Armenia (6th place), Russia (1st) and Hungary (7th), overpassing 0.45 pts/min., thanks to a combination of high WQ and a controlled Neg. WQ.
- 2nd and 3rd places (Iran and Turkey) were not better than Russia about defensive efficacy, but scored enough to keep a positive WQ index.
- Georgia and Korea had the worst defensive values while their attack performance was above average.
- Germany had the best defensive performance, followed by Hungary, Armenia, Turkey and Russia.

Figure 12 - Points scored per Value
Greco-Roman Wrestling Top 10 Nations (pts/m)

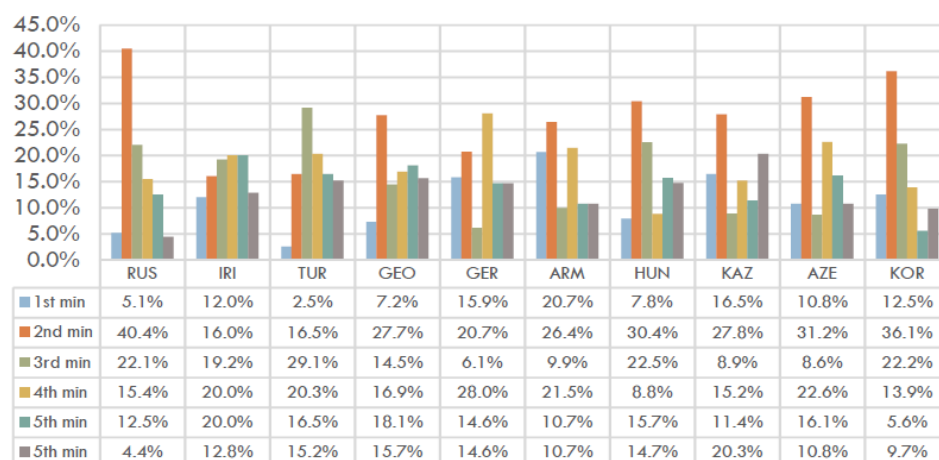


Highlights

- As expected due to the Passivity rules, 1 pts scoring were important proportion of the total scoring (both won and lost) of all the Top 10 nations.
- Armenia, Hungary, Russia, Germany and Korea overpassed their 1 point scoring with 2pt actions, but the last three did that for a few.
- The higher scoring by 4 points moves were made by Korea, followed by Armenia and Russia, all of them around 0.20 pts/m.

Scoring Pace of Top 10 teams

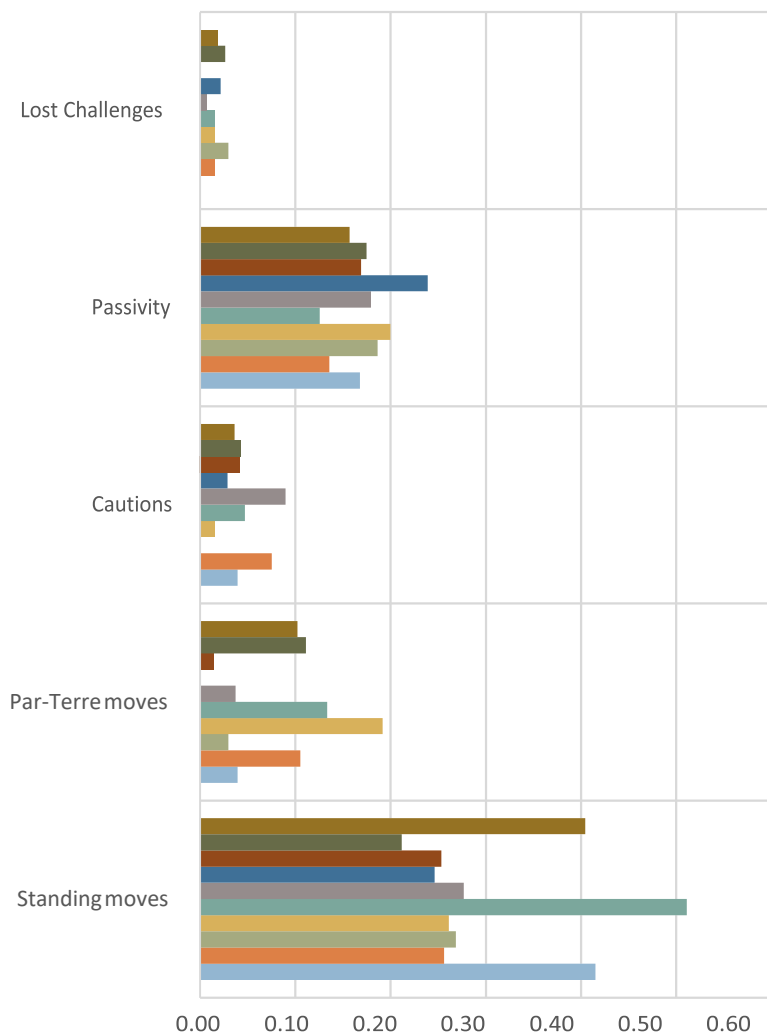
Figure 13 - Scoring Pace of Top 10 teams



Highlights

- Russian wrestlers together scored more percentage of points during 2nd minute that the rest of teams, followed by Korea.
- The most powerful 1st minute was done by Armenia (20%) and Germany (15.9%).

Figure 14 - Methods to score
Greco-Roman Top 10 teams



Highlights

- Standing and due-to-passivity scoring proportion were basically similar for all the teams: higher from standing, then Passivity.
- Noticeable differences were found regarding par-terre scoring. Georgian Team did not score from par-terre at all. Turkey, Germany, Kazakhstan and Korea did not surpass 0.05 pts/min in such position. The other teams reached over 0.10 pts/m.

Highlights

- Germany showed the best Standing Defense as a team, followed by Turkey, Kazakhstan and Russia. The lowest values were got by Iran, Georgia, Armenia, Azerbaijan and Korea.
- Best defense in par terre were Germany, Turkey, Russian, Armenia, Hungary and Azerbaijan. Georgian and Korea had the lowest level among the group.
- It is interesting that the points lost through passivities represent similar values among the top 10 teams. There is no evident association of passivity lost points with Standing or Par-terre defensive performances.

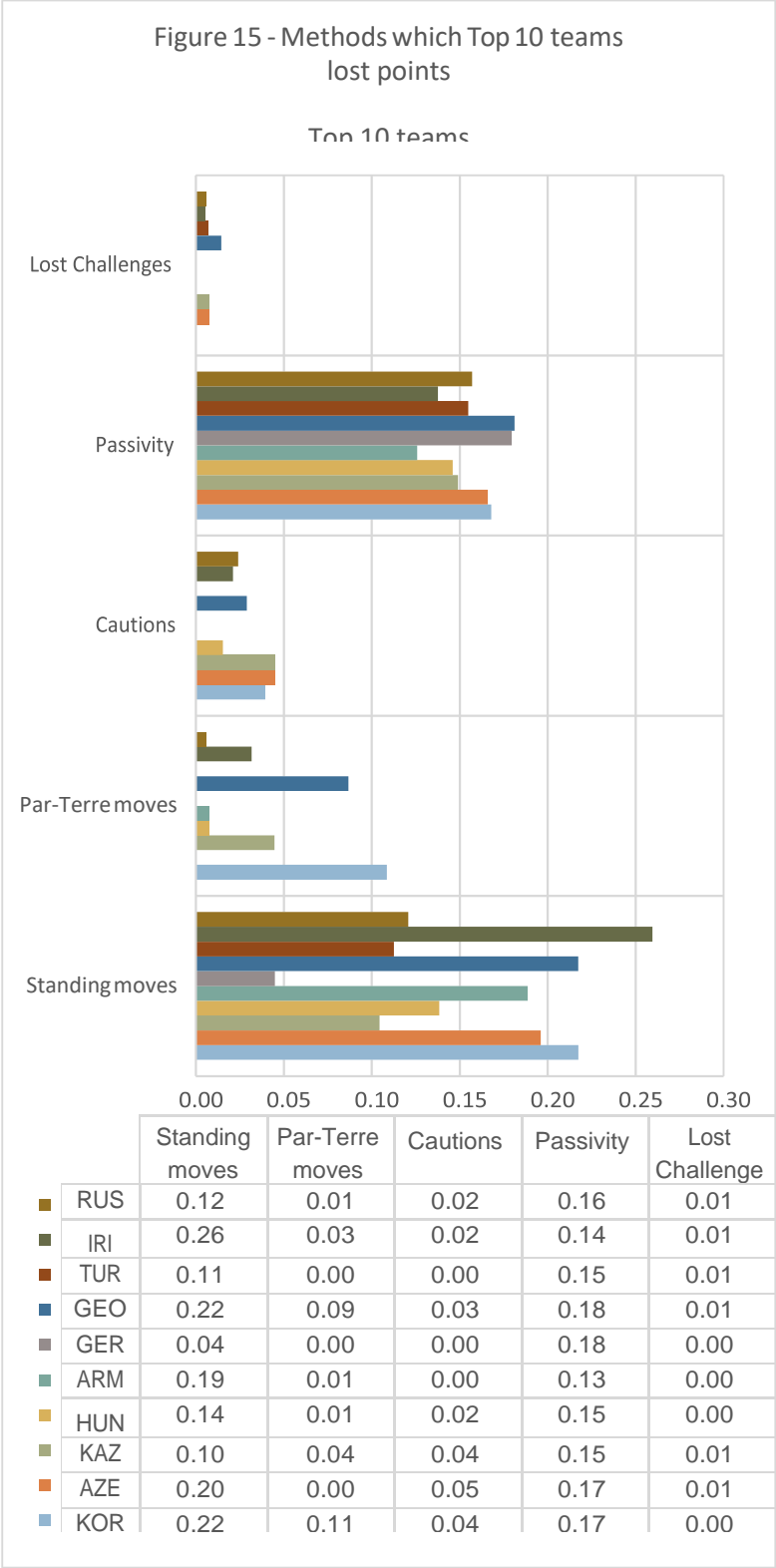


Figure 16 - Scoring Strategies, Standing Moves by Attack & Counterattack
Greco-Roman, Top 10 Teams

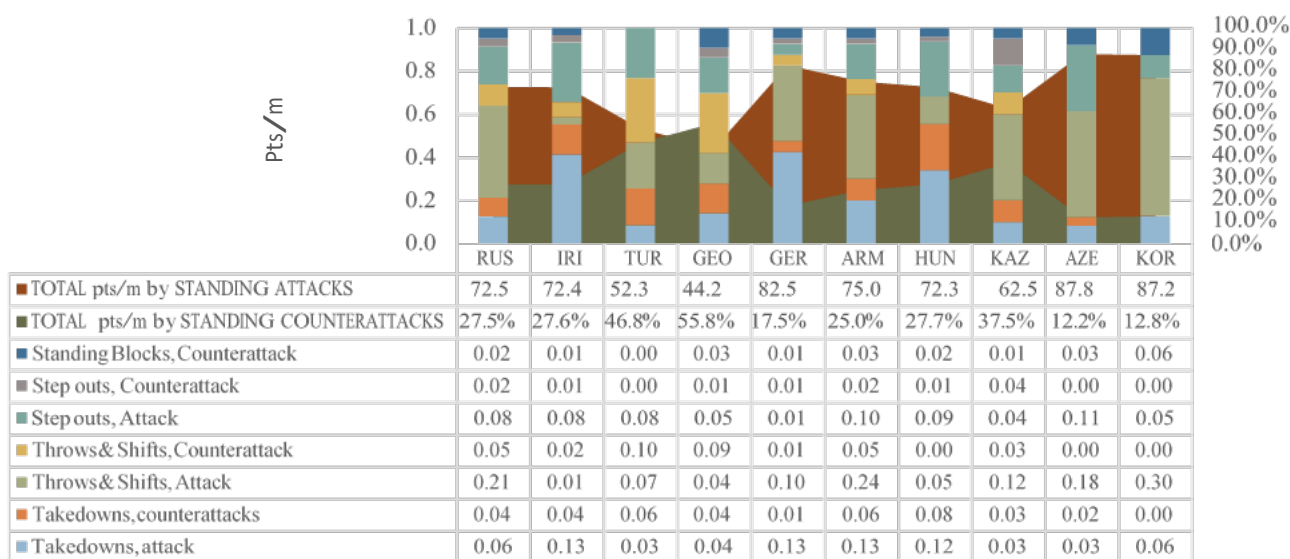
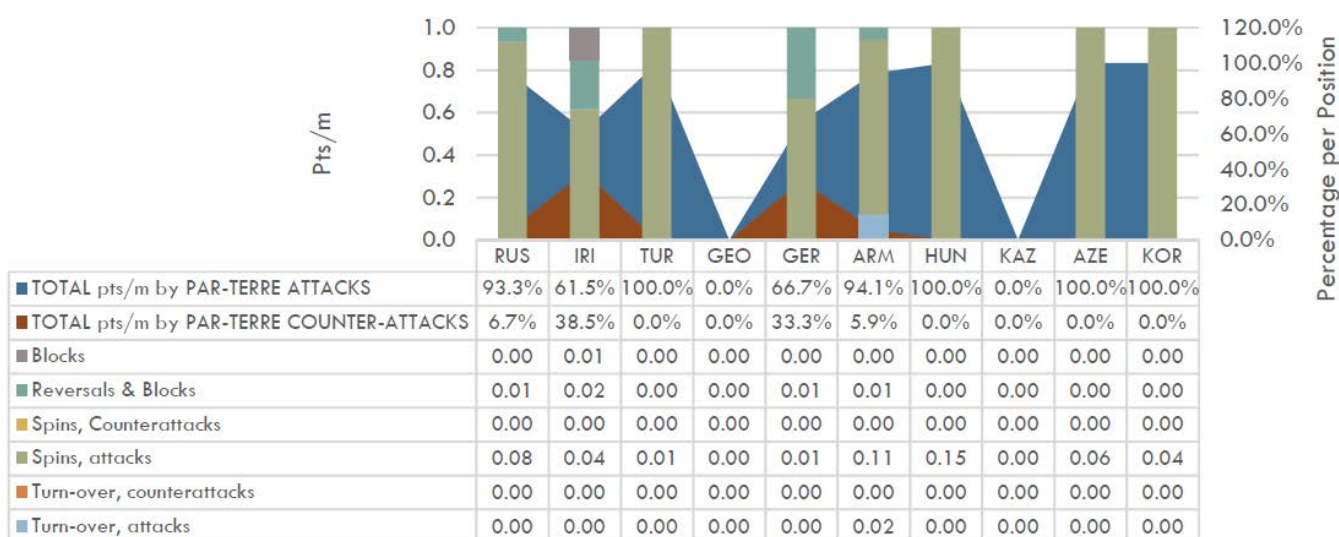


Figure 17 - Scoring Strategies, Par-terre Moves by Attack & Counterattack
Greco-Roman Top 10 Teams

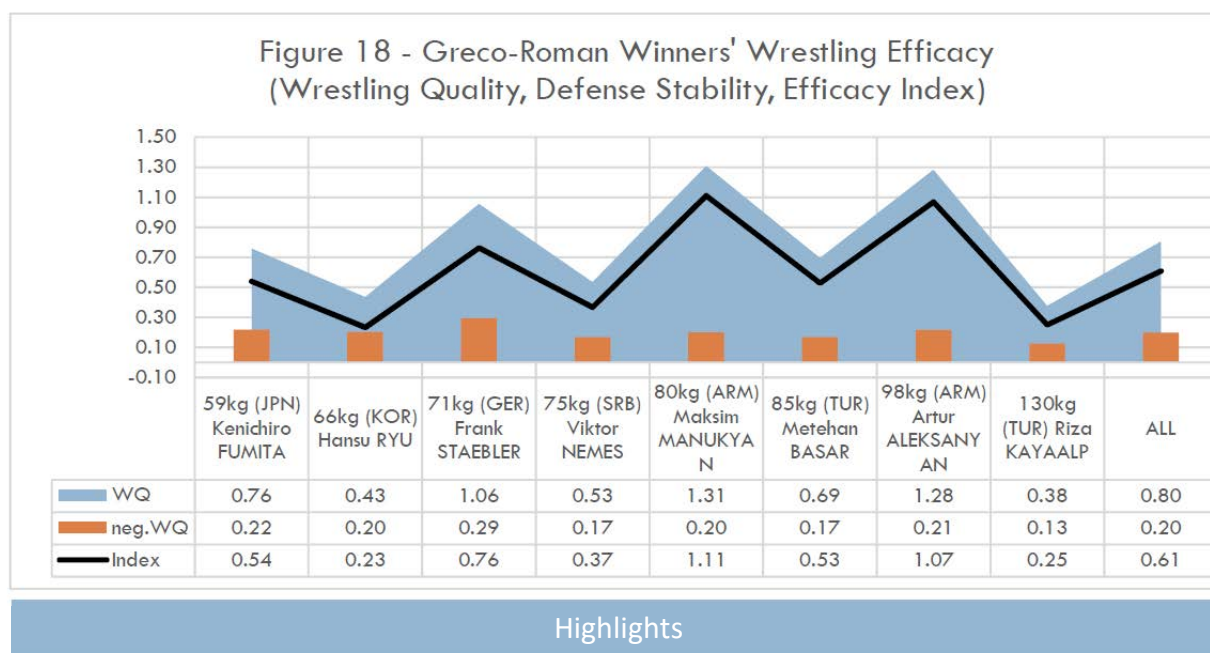


Highlights

- Excepting Georgia and Turkey, the Top 10 teams scored more with Attack Moves. Korea, Azerbaijan and Korea scored less with Counterattacking standing moves than the rest of National Teams.
- Teams ranked 9th and 10th (Azerbaijan and Korea) were also the ones with less counterattacking moves from Standing.
- The most of the par-terre moves were attacking techniques.

ANALYSIS OF WINNERS SCORING

Wrestling Efficacy (Wrestling Quality, Defense Stability, Efficacy Index)



- Average WQ index of the champions was 0.61 pts/m. As the 2015 Senior World Champions reported by Tünnemann was 1.1pts/min., the comparison exposes a progressive decrease of the overall activity of the best wrestlers in this kind of events since 2014 (1.2pts/m were the average of the champions of the last year mentioned).
- It can be seen similar defensive values among the 8 champions of 2017, ranging from 0.13 to 0.29 neg pts/min.
- The best efficacy values of WQ Index were obtained by Manukyan and Aleksanyan (ARM) as well as Stäbler (GER).

Distribution of points scored and lost by value, Greco-Roman Champions.

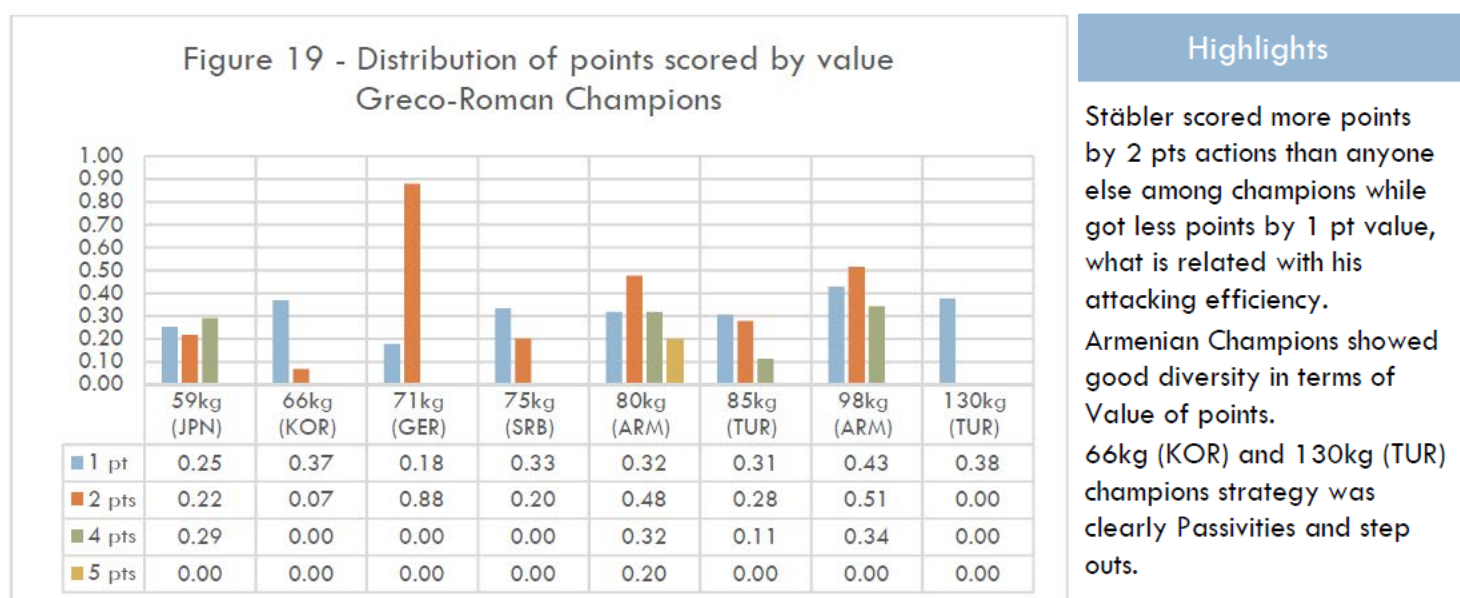
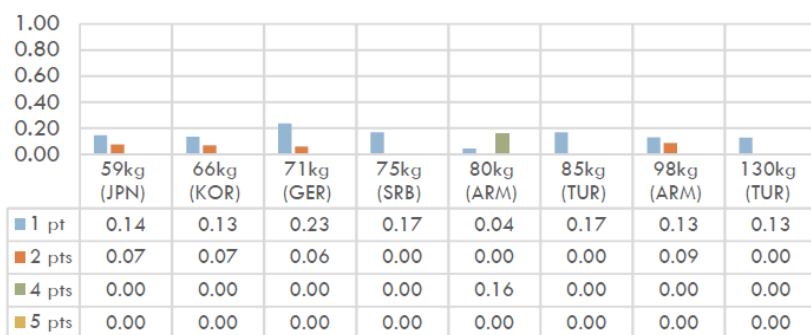


Figure 20 - Distribution of points lost by value
Greco-Roman Champions

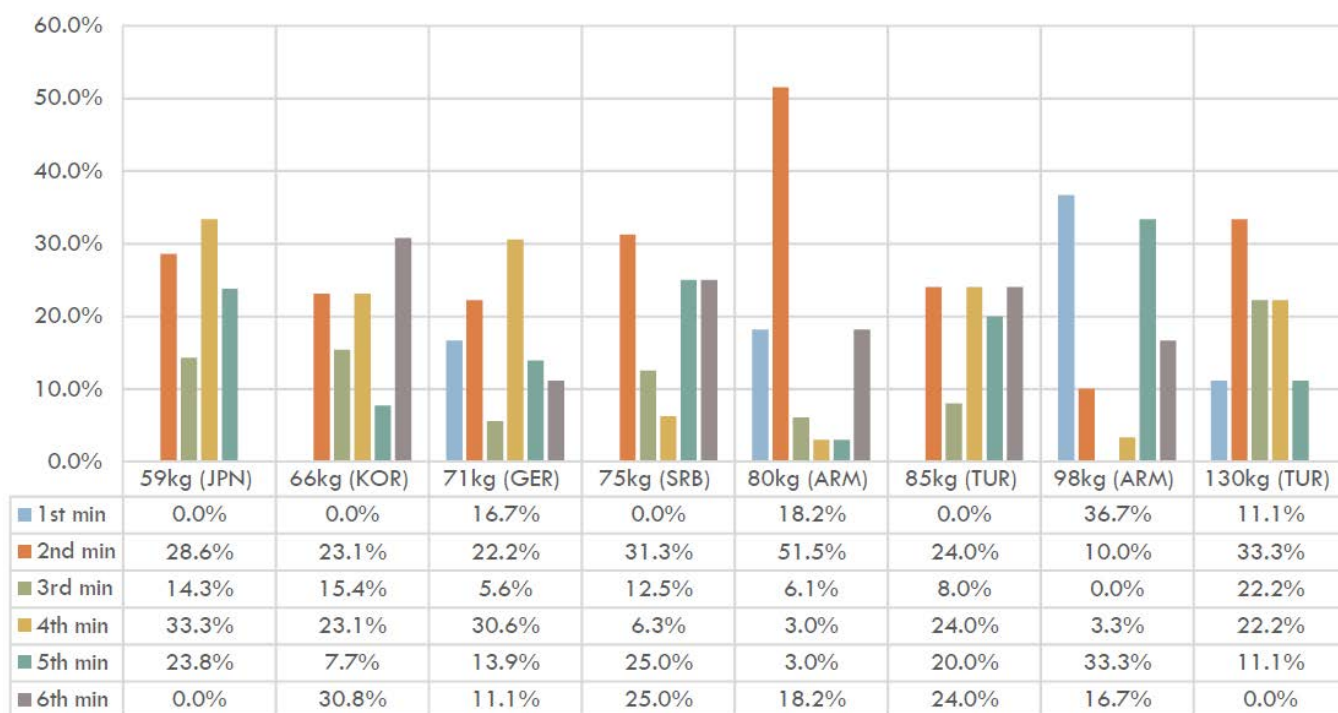


Highlights

- Despite the distribution by value may differ a bit among the champions, and as mentioned before, their defense efficacy was very similar, which points this feature as a basic task among them.

Scoring pace of Greco-Roman Champions.

Figure 21 - Scoring Pace, Greco-Roman Champions



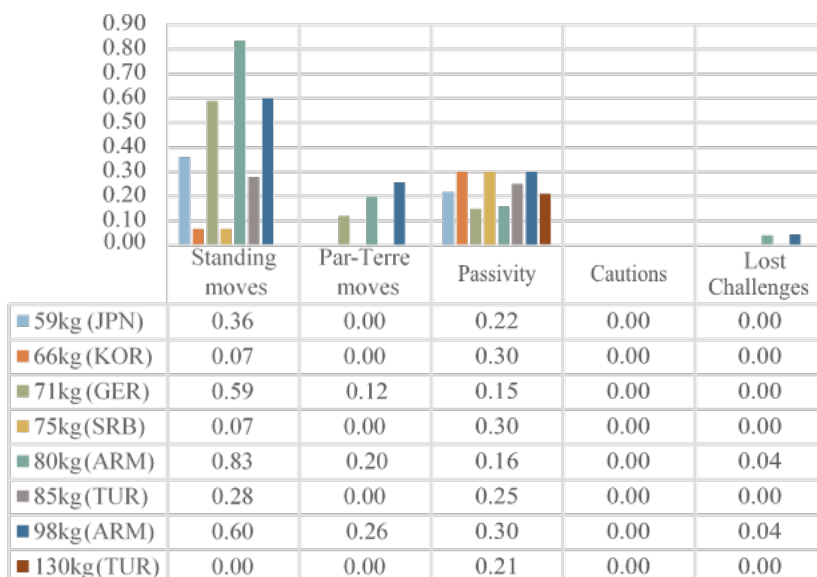
Highlights

- Stäbler, Armenian Winners and Kayaalp (TUR) were the only ones scoring points during 1st minute in at least one match, which highlights their proactive approach.
- Almost all the Champions scored more points during the second periods, excepting Manukyan (80kg) and Kayaalp (130kg).

Highlights

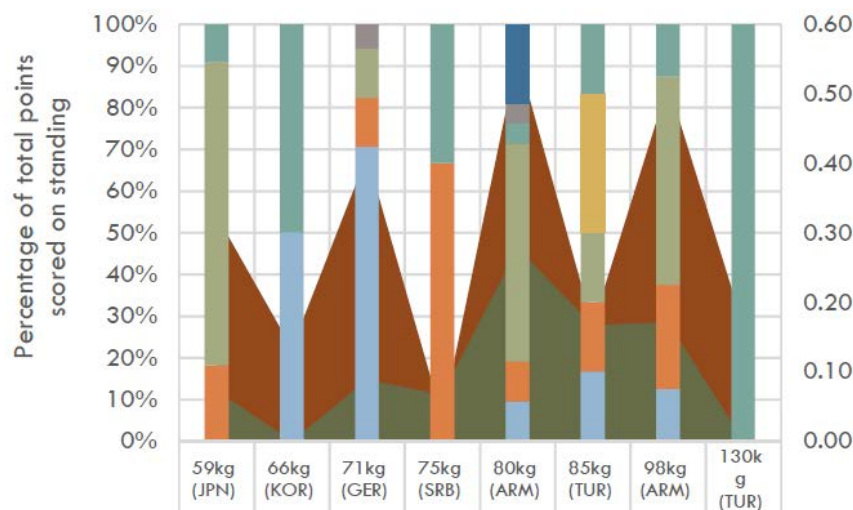
- There is no clear trend among champions regarding Standing Moves. 4 of them scored over 0.36 pts/m, while 3 ranged from 0.0 to 0.07 in the same position. One more champion got .28pts/m.
- Only the champions from Germany and Armenia scored from Par-terre.
- As mentioned before, Points by Passivities contributed similarly among the sample.

Figure 22 - Methods to score, Greco-Roman Champions



Points scored by strategy and move, Greco-Roman Champions

Figure 23 - Scoring Strategies, Standing Moves by Attack & Counterattack, GR Champions



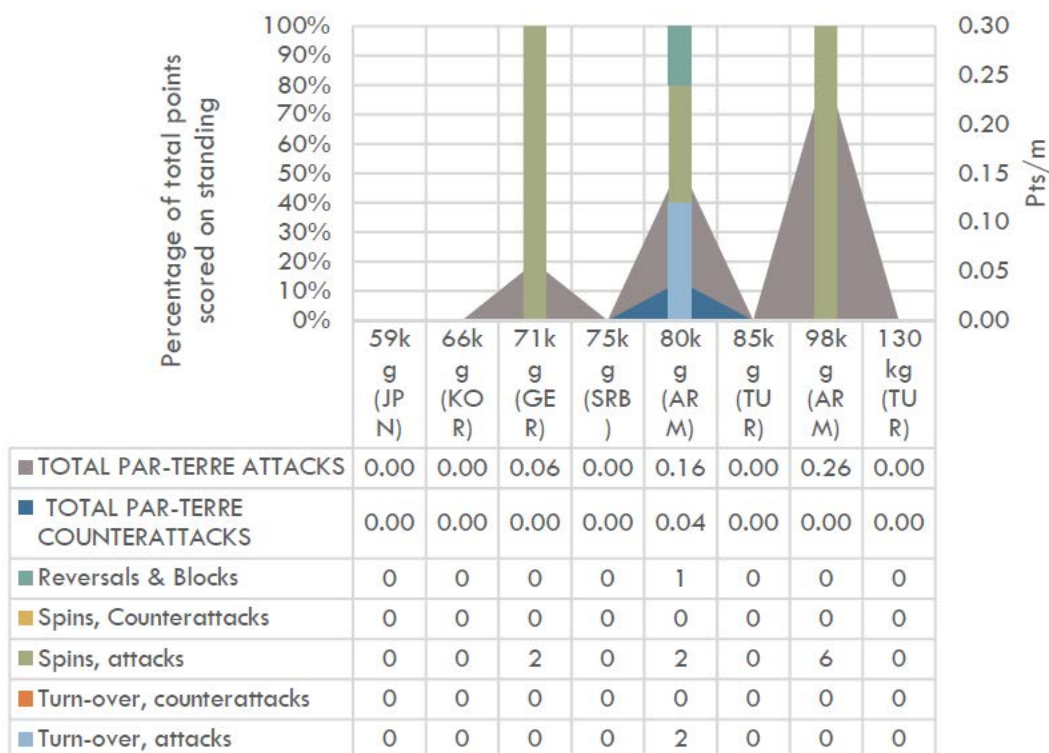
Highlights

- The greater diversity of Technical Moves by group were shown by Stäbler and Manukyan.
- On the other hand, Champions of 66kg, 75 kg and 130kg, whose values of standing attacks were lower than 0.17pts/m were also those who showed less diversity in standing.

Highlights

□ Again, Gut Wrench was the basic move to score for the champions from Germany and Armenia. The other 5 Champions did not score a single point from Par-terre.

Figure 24 - Scoring Strategies, Par-terre Moves by Attack & Counterattack, Greco-Roman Champions



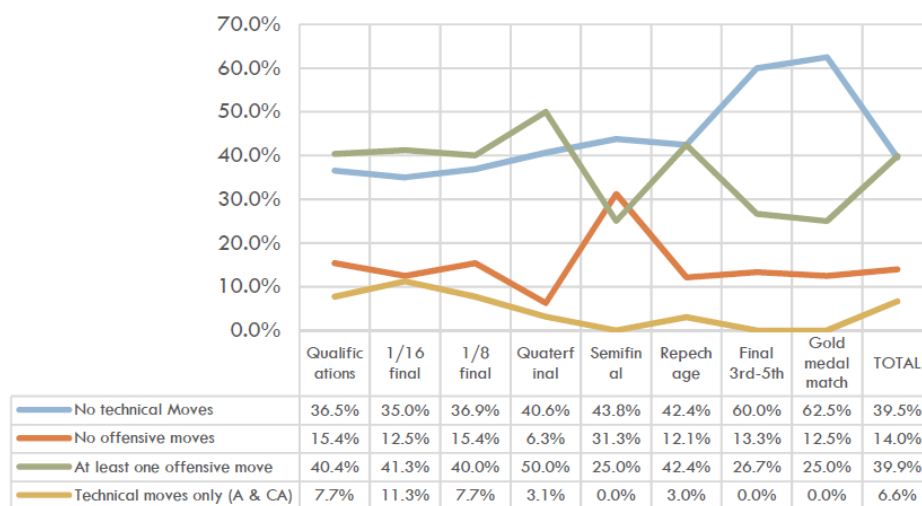
PARTICULAR ANALYSIS OF GRECO-ROMAN ASPECTS

Usage of Standing Attack Moves per Round, all wrestlers

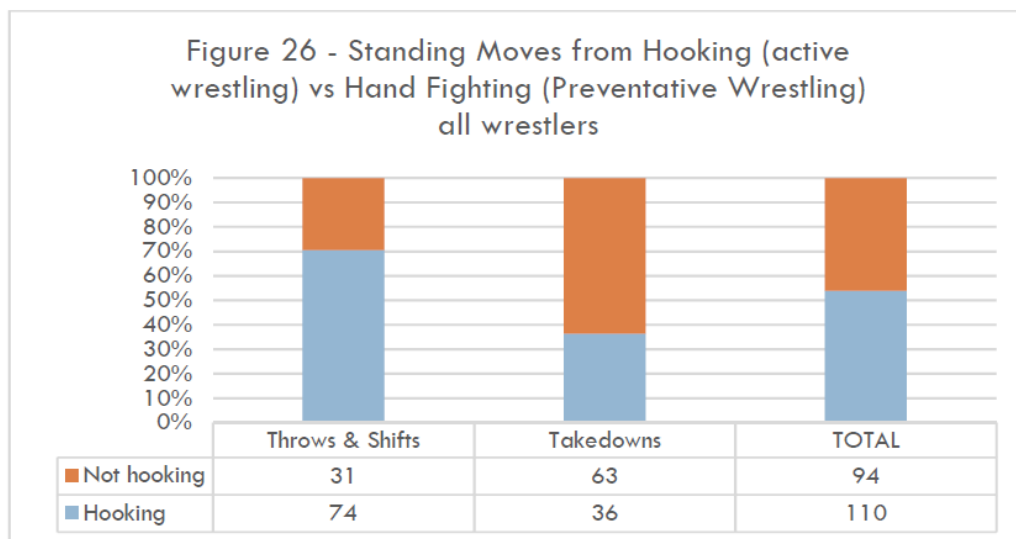
Highlights

- Considering percentages of bouts won without a single standing technical move and won with no offensive moves, over than 50% of the matches were won without score a single time by attacking from standing.
- During Semifinals and Medal Matches, winning without technical moves reached the highest percentage.

Figure 25 - Percentage of Bouts won by using STANDING ATTACK MOVES
Senior World Championships 2017 - Greco-Roman style



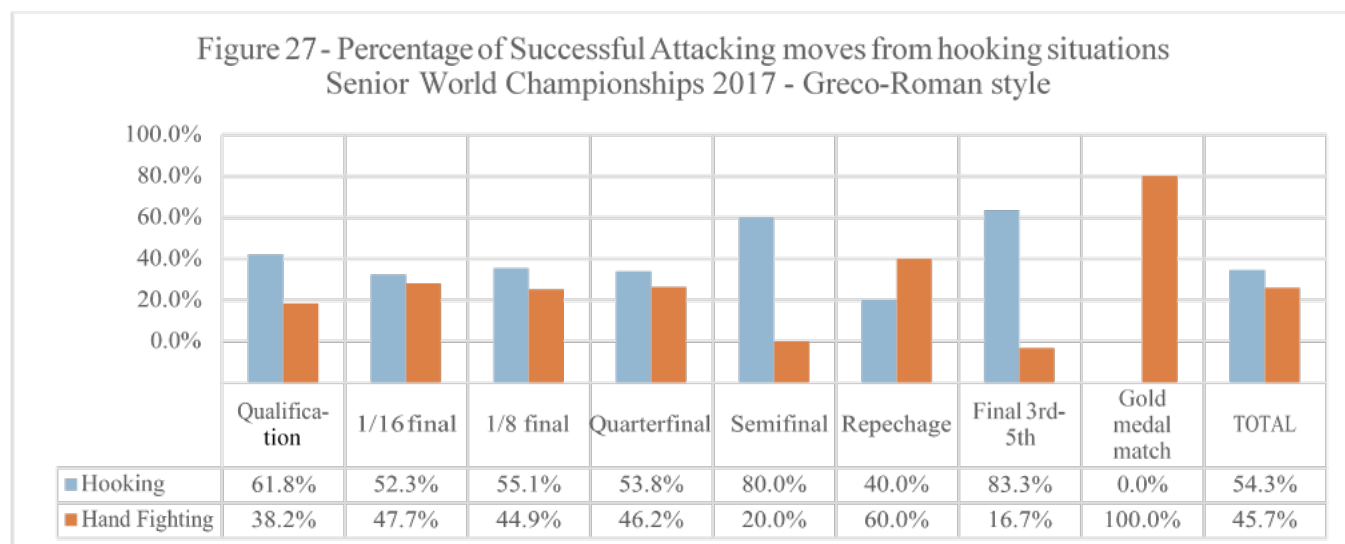
Percentage of Standing Moves from Hooking



Highlights

The most spectacular moves which also allows to pin the opponent (Throws and Shifts) were made mostly from Hooking, while most of the takedowns (arm drags, snaps, etc) were made by hand fighting.

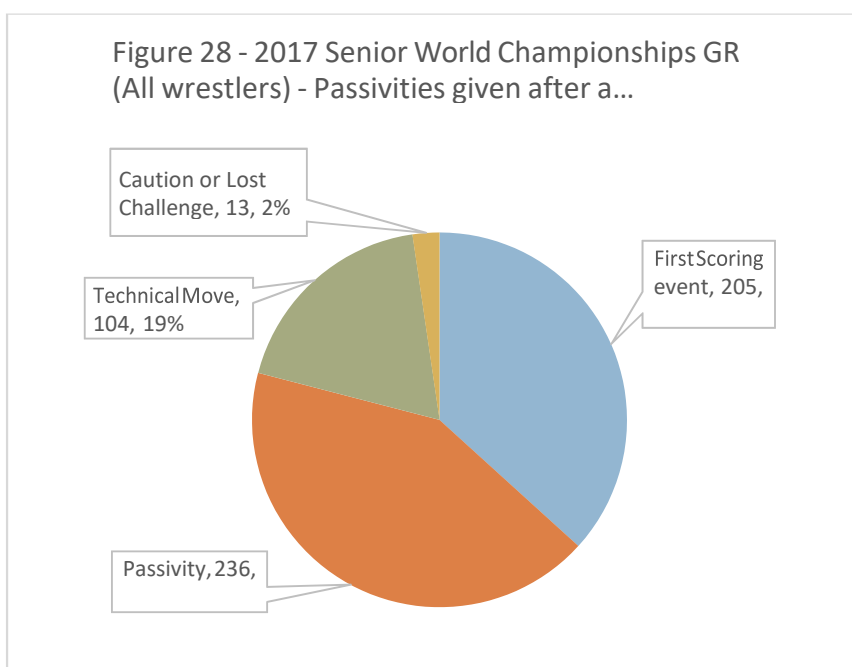
Active Wrestling vs Preventative Wrestling by Round, all Wrestlers



Highlights

□ Standing Moves from Hooking were higher than hand fighting by a small percentage in the most of the rounds, except during repechage and gold medal matches, when Hand Fighting was higher than active wrestling. No doubt that promote hooking effectively is an important challenge which may change the current dynamic in Greco-Roman senior events.

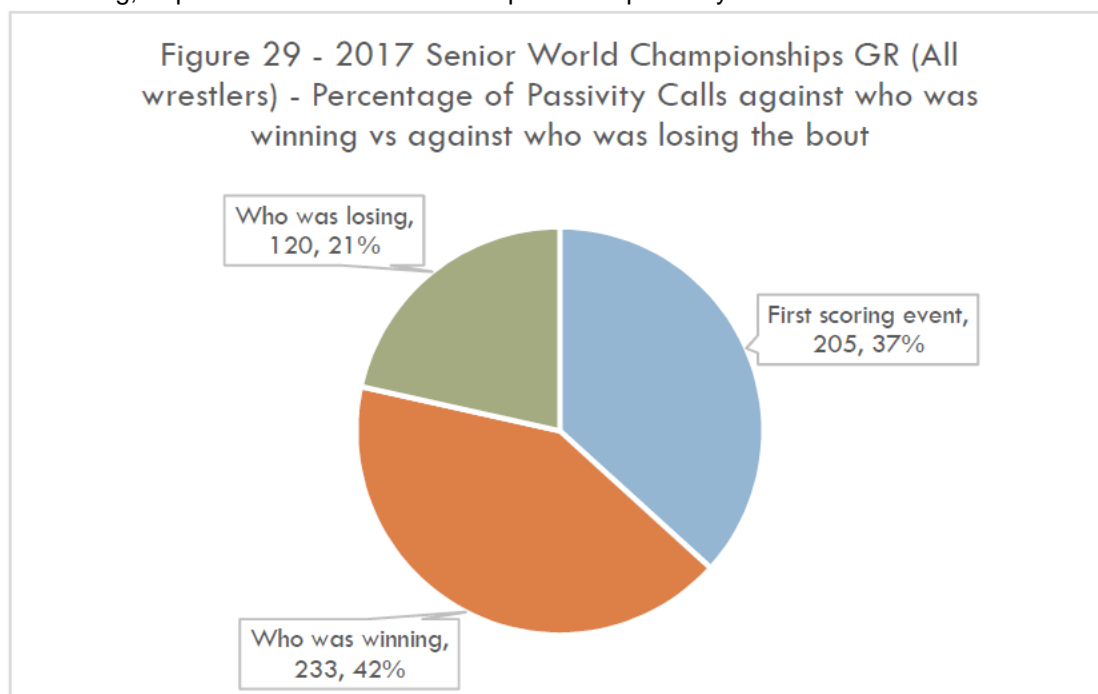
Scoring or penalization situation which preceded passivity calls- all wrestlers



Highlights

- About a third of passivity calls were the very first scoring event of the match.
- Over 40% of all passivity calls were preceded by another passivity call, which suggests that, at least during Paris' Worlds, the effectiveness of this penalization were not efficient enough to promote active wrestling.

Scoring, or penalization situation which preceded passivity calls- all wrestlers



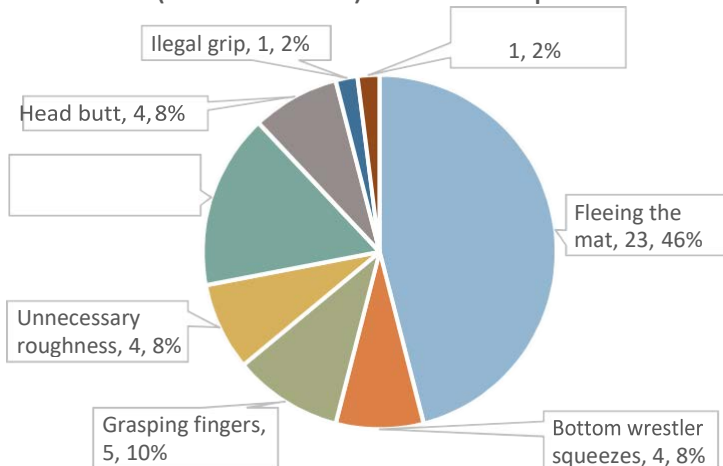
Highlights

- Calls attention the fact that almost the same number (and virtually the same percentage) of passivities called after a previous passivity (see Figure 28) was called against the wrestler who was winning the match.
- It is evident that many wrestlers adopt a defensive, not active wrestling strategy right

Highlights

- Almost 50% of the cautions were given due to a wrestler fleeing the mat.
- The rest of the cautions are distributed among many other different reasons, being GR illegal grip (leg grip or block, etc.) the second most common.

Figure 30 - 2017 Senior World Championships GR (All wrestlers) - Cautions per Cause



SUMMARY

- Greco-Roman wrestling quality is decreasing even with the set of rules which granted more standing wrestling time. The reason may not be that rule by itself, but a defensive approach aimed to avoid risks including active wrestling (hooking) and even reducing pinning attempts. A rule amendment or competition system which could motivate wrestlers to look for the best, spectacular and technical performance possible (look for high value actions, technical superiority and pinning) during every round could change this trend.
- Among champions, in Paris were good positive examples of offensive, diverse wrestlers, able to both attack and counterattack from standing and par-terre, whose Quality Index values were not significantly lower than the 2015 average and even a couple of them overpassed those. Again, by valuing more these Performances over victories without standing moves or no attacking actions would work positively. It is suggested that the discussion could consider that direction.




















WOMEN'S WRESTLING

All 227 bouts by the 191 competitors and 1066 scoring events awarded with technical points, representing 44 national teams who took part of the tournament were analyzed.

PARTICIPANTS BY TEAM AND WEIGHT CATEGORY

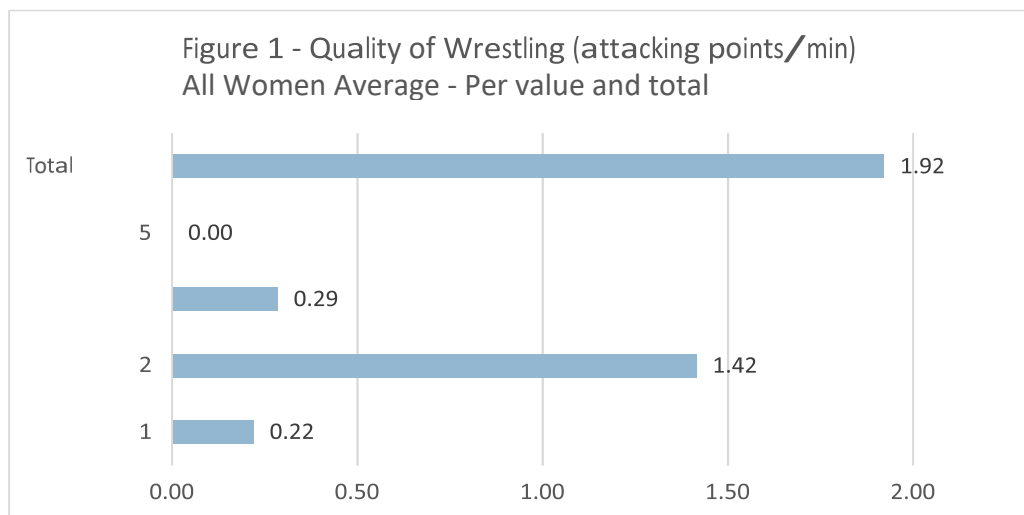
	Teams	48 kg	53 kg	55 kg	58 kg	69 kg	60 kg	63 kg	75 kg	TOTAL
1	AUS	1	1	1	1	0	0	0	0	4
2	AUT	0	0	0	0	1	0	0	0	1
3	AZE	1	1	1	1	1	1	1	0	7
4	BLR	1	1	1	1	1	1	1	0	7
5	BRA	1	0	0	0	1	0	1	1	4
6	BUL	1	0	1	0	1	1	1	1	6
7	CAN	1	1	1	1	1	1	1	1	8
8	CHN	1	1	1	1	1	1	0	1	7
9	COL	0	1	0	1	0	0	1	1	4
10	CZE	0	0	1	0	0	0	1	0	2
11	DOM	0	0	0	1	0	0	0	0	1
12	EGY	0	0	0	0	0	0	0	1	1
13	ESP	1	0	0	0	0	0	0	0	1
14	EST	0	0	0	0	0	0	0	1	1
15	FRA	1	1	1	1	1	1	1	1	8
16	GER	0	1	1	1	1	1	0	1	6
17	HUN	0	0	1	0	0	1	0	0	2
18	IND	1	1	1	1	1	1	1	1	8
19	ISR	0	0	0	0	0	0	1	0	1
20	ITA	0	0	1	0	0	0	0	0	1
21	JPN	1	1	1	1	0	1	0	1	6
22	KAZ	1	1	1	1	0	0	1	1	6
23	KGZ	0	0	1	0	1	0	0	1	3
24	KOR	1	1	1	1	1	1	1	1	8
25	LAT	0	0	0	0	0	1	0	0	1
26	LTU	0	0	0	1	1	0	0	0	2
27	MDA	0	1	0	0	0	0	0	1	2
28	MGL	1	1	1	1	1	0	1	1	7
29	NED	1	0	0	0	0	0	0	0	1
30	NGR	1	0	1	1	0	0	1	0	4
31	NOR	0	0	0	1	0	0	0	1	2
32	NZL	0	0	0	0	0	0	1	0	1
33	PER	1	1	0	1	0	0	1	0	4
34	POL	1	1	1	1	0	1	1	0	6
35	PRK	1	1	0	0	0	0	0	0	2
36	PUR	0	0	0	0	0	1	0	0	1
37	ROU	1	1	0	0	0	1	0	0	3
38	RUS	1	1	1	0	1	1	1	1	7
39	SWE	1	0	0	1	0	1	1	0	4
40	TUN	0	1	0	0	0	0	0	0	1
41	TUR	1	1	1	1	0	1	1	0	6
42	UKR	1	1	1	1	1	1	0	1	7
43	USA	1	1	1	1	1	0	1	1	7
44	VIE	1	1	1	1	0	1	0	0	5
	TOTAL	27	25	24	27	19	23	23	23	191

SENIORS WOMEN'S WRESTLING TEAMS RANKING (Classification Points earned by Weight Class)

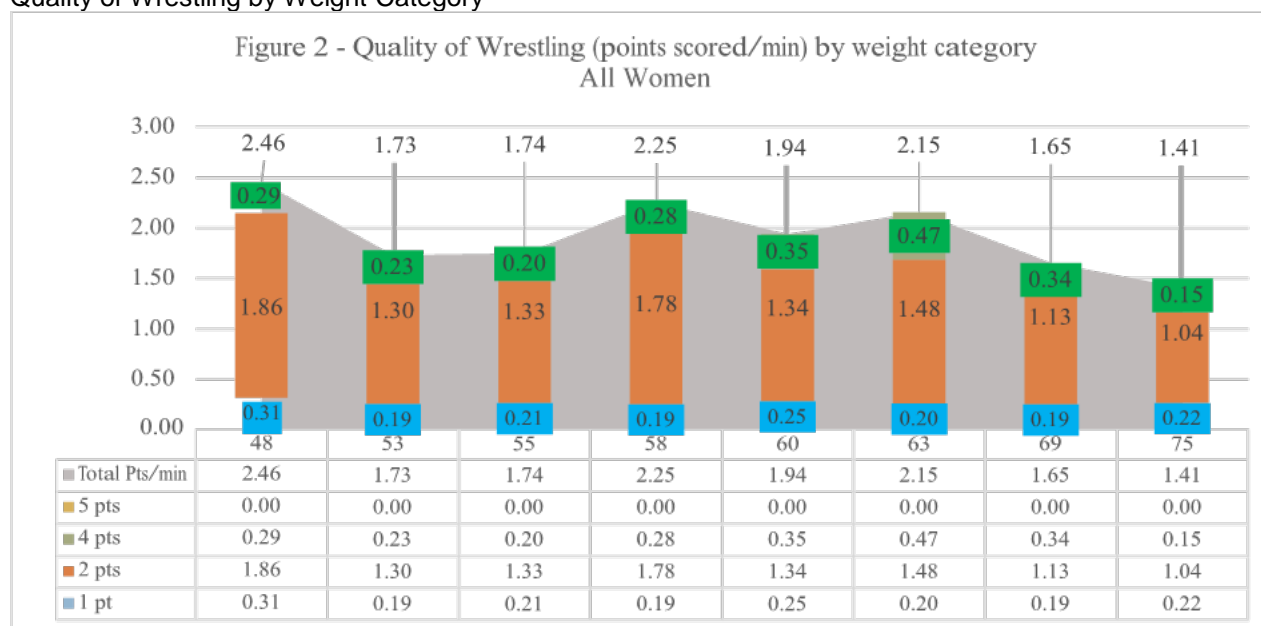
Rank	Team	48 kg	53 kg	55 kg	58 kg	69 kg	60 kg	63 kg	75 kg	TOTAL
1	 JAPAN	10	9	10		10	10	3	8	60
2	 BELARUS	6	10	8		3		2	9	38
2	 UNITED STATES	6	3	8	10	2	9			38
4	 MONGOLIA			3		4	6	10	2	25
5	 TURKEY	8						6	10	24
6	 CANADA	4			8		4		8	24
7	 CHINA				6	8			6	20
8	 ROMANIA	9	6				3			18
9	 SWEDEN				6		8	4		18
10	 NIGERIA			9	2			6		17
11	 RUSSIA		4	4		1		8		17
12	 FRANCE	2		6		8				16
13	 GERMANY					9	6			15
14	 UKRAINE		2		3			9		14
15	 DPR KOREA	8	6							14
16	 COLOMBIA							8	4	12
17	 POLAND	3	8							11
18	 TUNISIA				9					9
19	 KYRGYZSTAN				8				1	9
20	 LATVIA						8			8
21	 BULGARIA			6			2			8
22	 KAZAKHSTAN			1		6				7
23	 INDIA	1	1	2					3	7
24	 AUSTRIA					6				6
24	 ESTONIA								6	6
26	 DOMINICA				4					4
27	 BRAZIL							1		1
27	 LITHUANIA				1					1
27	 VIETNAM						1			1
30	 AUSTRALIA									0
30	 AZERBAIJAN									0
30	 CZECHIA									0
30	 EGYPT									0
30	 SPAIN									0
30	 HUNGARY									0
30	 ISRAEL									0
30	 ITALY									0
30	 KOREA									0
30	 MOLDOVA									0
30	 NETHERLANDS									0
30	 NORWAY									0
30	 NEW ZEALAND									0
30	 PERU									0
30	 PUERTO RICO									0

SCORING BREAKDOWN, ALL WRESTLERS

Quality of Wrestling



Quality of Wrestling by Weight Category

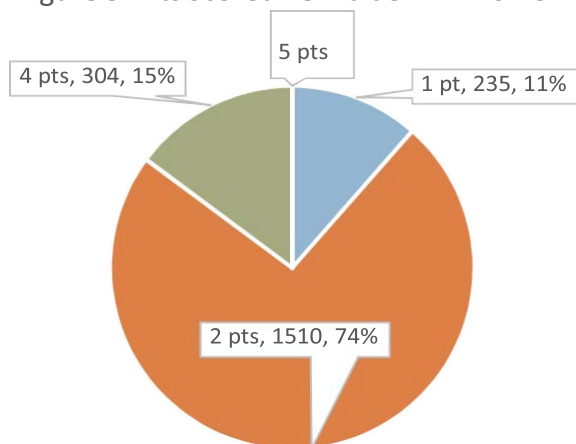


Highlights

- Quality of Wrestling value reached by all Women (1.92 pts/m) was slightly lower than Men's Freestyle (1.99 pts/m).
- Quality per scoring value in Women's Wrestling shows a similar trend than Men's Freestyle, but the first ones showed a higher scoring with 4 points actions (Women= 0.29 pts/m, Men= 0.16).
- By weight class, 48kg, 58kg and 63kg surpassed 2.0 pts/m. The higher performance scoring with 4 points actions was shown by weight classes 60kg, 63kg and 69kg, ranging from 0.34 to 0.47 pts/m.

Points scored per value – Total and Percentage

Figure 3 - Pts Scored Per Value - All Women



Highlights

- 2049 tech. pts. were scored by all Women, with almost 75% scored with 2 pt actions.
- 4 pts. actions reached 15% of the total scoring, almost the double of the scored by men (8.1%). Nevertheless, not a single 5 pt action was registered.

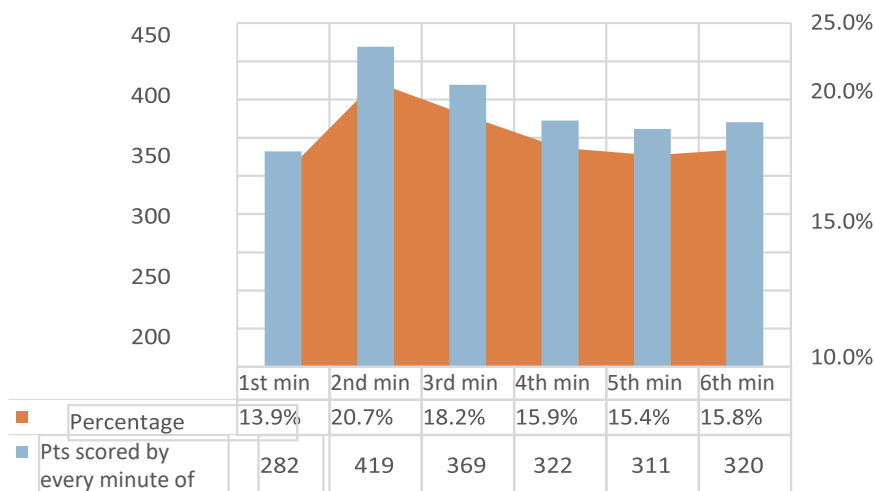
Scoring pace - Points scored minute by minute.

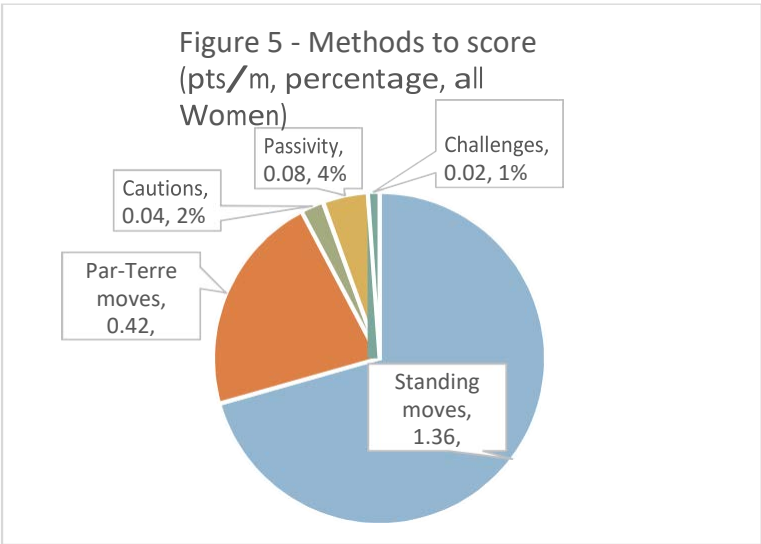
Highlights

Women's Wrestling values showed similar trend than Men's Freestyle:

- Minute by minute activity was constant, ranging from almost 14% to a bit over 20%.
- Second minute of match registered the highest scoring percentage of, which could be explained by the activity encouraging rules.

Figure 4 - Scoring Pace (points scored by every minute of match) - All Women

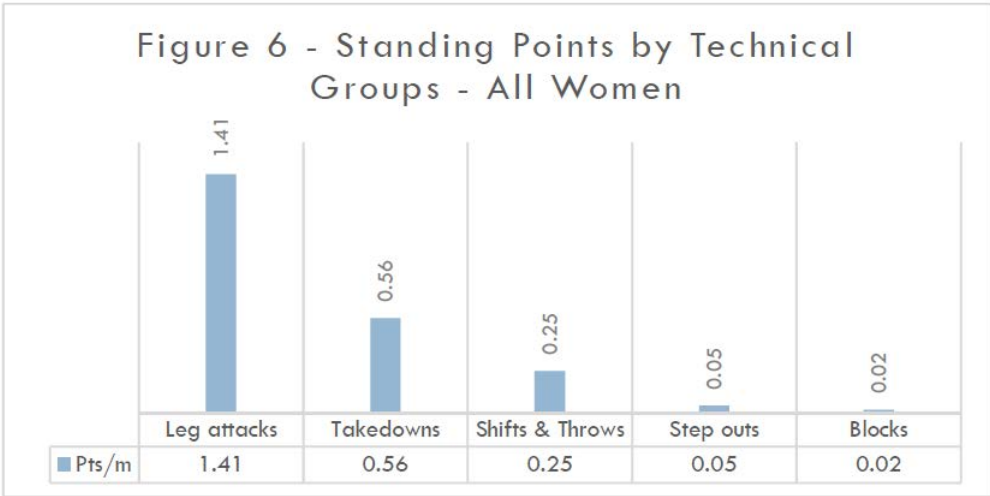




Highlights

- Standing moves were the most used method to score (71%). Altogether with Par-Terre moves (22%), technical actions were the way to score more than 90% of the total points awarded.
- Low contribution of penalizations to the total scoring shows that the current rules allows wrestlers to decide bouts by themselves, consolidating the changes made 4 years ago.

Breakdown of Scoring by Technical Groups



Highlights

- Leg attacks (1.41pts/m) and Par-terre Spins (gut wrenches, ankles laces among other moves, 0.29pts/m) were the most recurrent technical group in Women's Wrestling.
- Step-outs low contribution suggests that the current rule to assess these moves are good to motivate wrestlersto score more through real techniques.
- Par terre arsenal keep a decreasing trend along the last years, as Turnovers, Reversals and Counter-offensive blocks show.

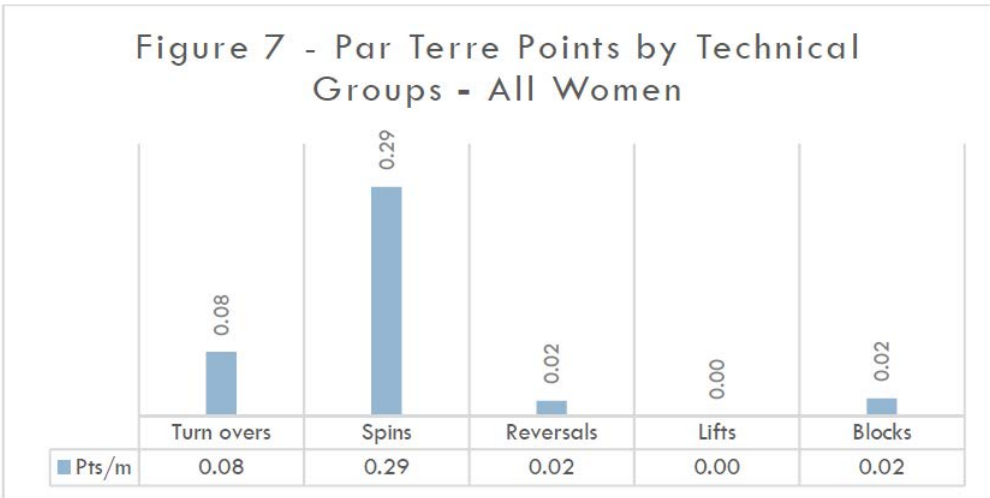
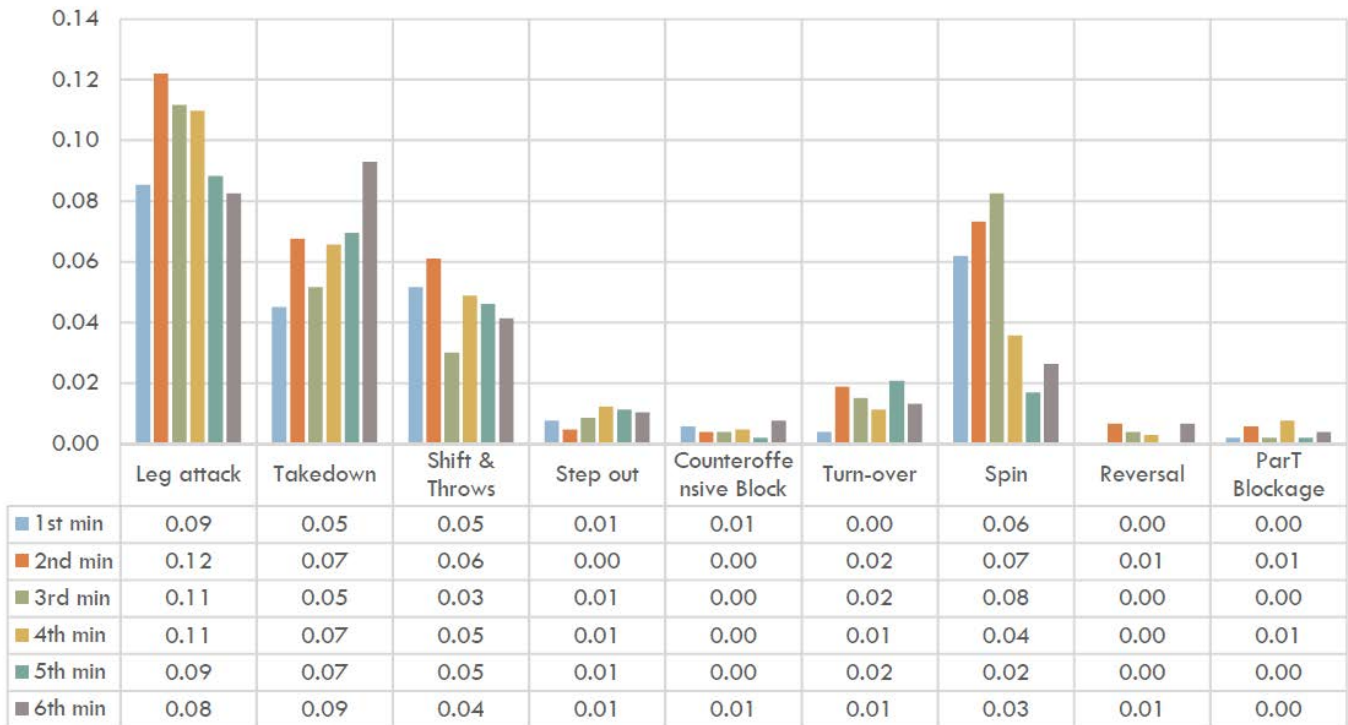


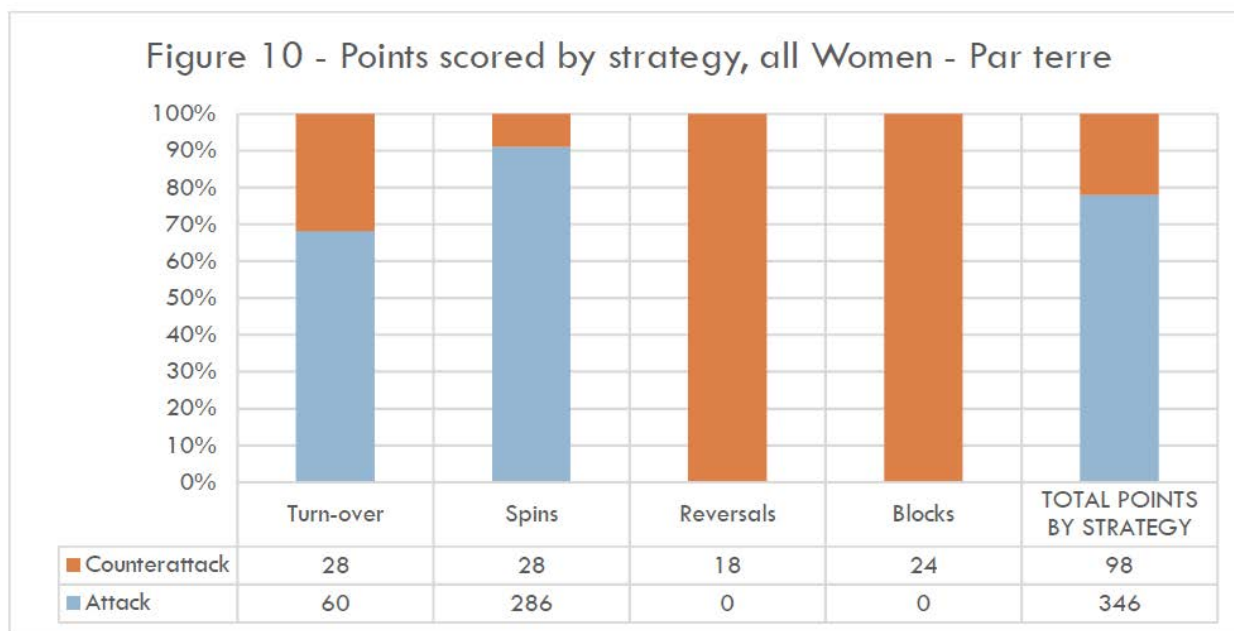
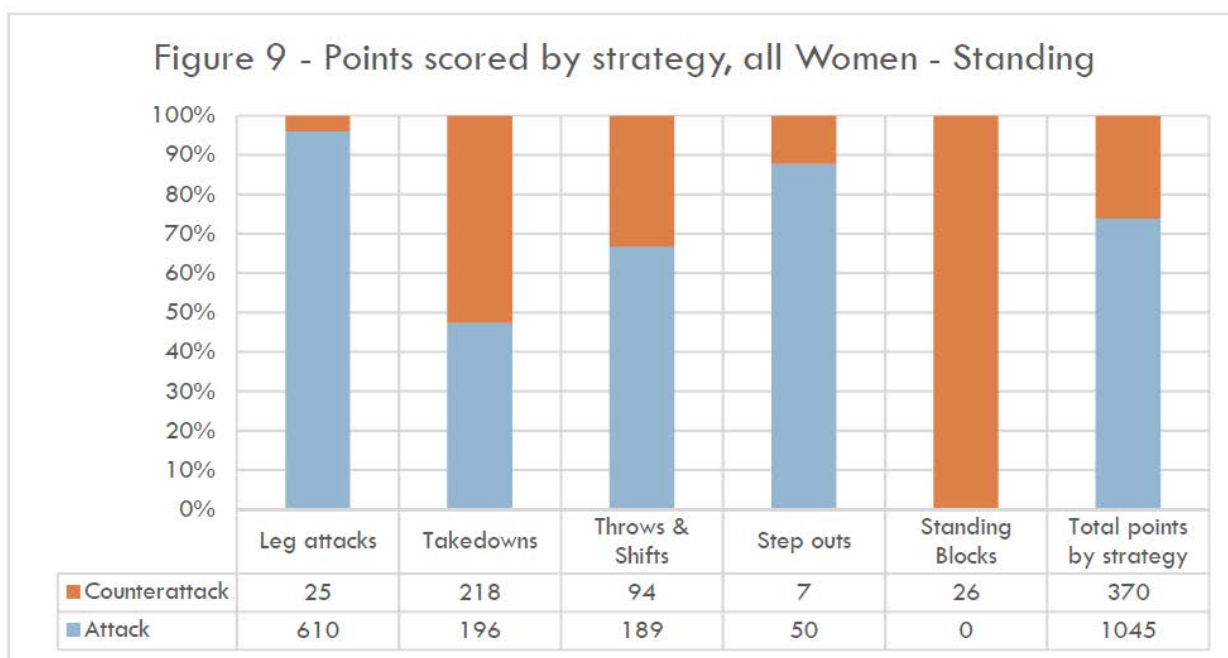
Figure 8 - Points scored by Technical Moves minute by minute
All Women



Highlights

Overall, the technical activity of Women's Wrestlers showed a constant usage as scoring resource:

- Almost all technical groups were registered at least once in every one of the 6 min.
- Usually, a technical group frequency decreases along second period as high-level wrestlers win by technical superiority. This is the case of Leg Attacks and Spins.
- On the other hand, Takedowns frequency significantly increased as the match approached the final minute). Likely these were counterattacks against leg attacks.
- Shift & Throws and Turn overs were consistently executed along the 6 minutes of bout.



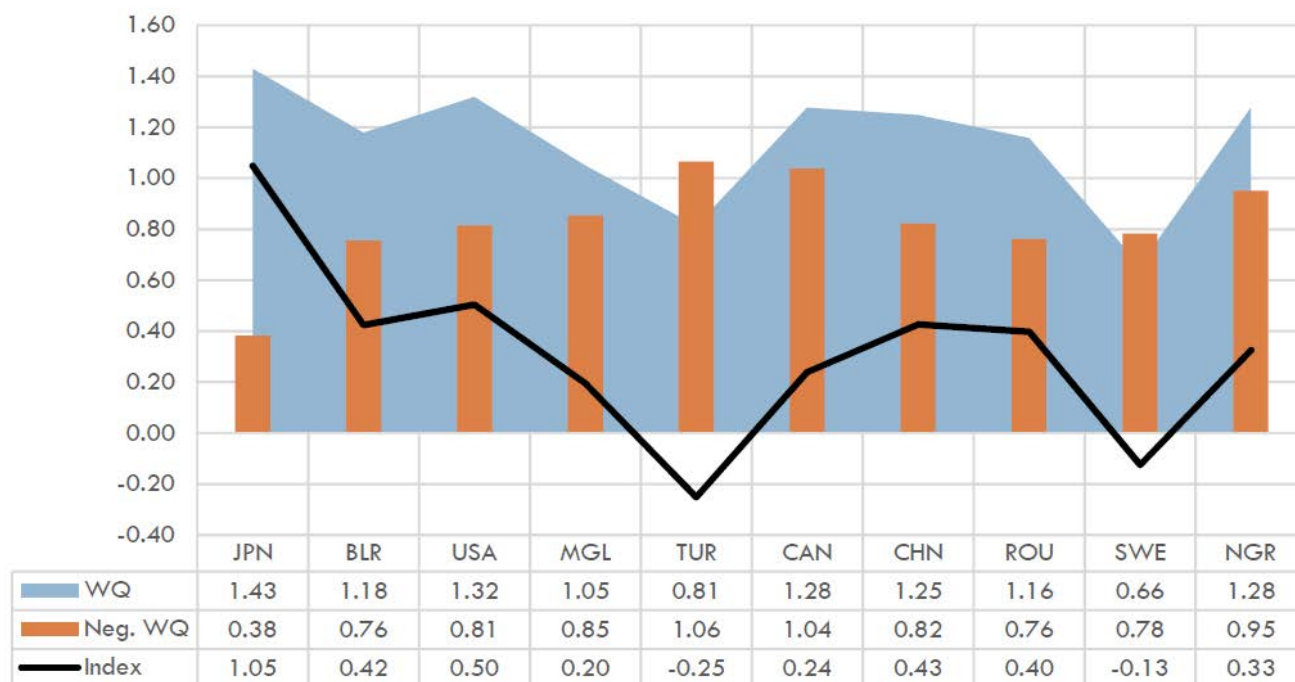
Highlights

- For both Standing and Par-terre, Attack strategies represented more than 70% of the total scoring.
- On standing, leg attacks, shifts & throws and step-outs were used more as attacking resource, while over than 50% of the takedowns were made as counter-offensive moves.
- While more than 60% of the turn-overs were made as counter-offensive moves by Men's Freestyle wrestlers in this tournament, Women showed the opposite trend.
- Due to their technical nature, Standing and Par-terre blocks (to hold defensive position against an attacking opponent to retain her/him on danger position) as well as reversals are 100% counter-offensive technical groups. Given its low frequency, these did not change the predominant offensive behavior of women wrestlers.

PERFORMANCE OF TOP 10 TEAMS

Wrestling Efficacy (Wrestling Quality, Defense Stability, Efficacy Index)

Figure 11 - Wrestling Efficacy, Women's Wrestling
Top 10 teams



Highlights

- The difference between points scored per minute on mat (Wrestling Quality or WQ) and Points lost per minute on mat (Defense Stability or neg. WQ) results Efficacy Index. The higher the gap between WQ and neg. WQ, the higher and better efficacy index (Tünnemann, 2016).
- As reported by Tünnemann (2016), Champion team JPN had a slightly lower Efficacy index in Championships (1.05pts/m) than 2015 World Championships (1.14pts/m), but their defensive skills were higher this 2017 edition (2017=0.38 neg pts/m, 2015=0.49). Even so, Japan had the best defensive efficacy on both 2015 and 2017 World Championships.
- Japan, USA, Canada, China and Nigeria showed higher Wrestling Quality values (over 1.2pts/m). Efficacy Index values of Canada and Nigeria was affected by their Defensive performance (1.04 and 0.95 neg. pts/m).
- It is worthy to highlight Belarus, USA, Romania and Nigeria performances, making the Top 10 teams ranking.
- Turkey and Sweden teams had negative Efficacy Index values due to offensive performance lower than 0.85 pts/m, which were below their own defensive skills values.

Figure 12 - Points scored per Value, Women's Wrestling Top 10 teams (pts/m)

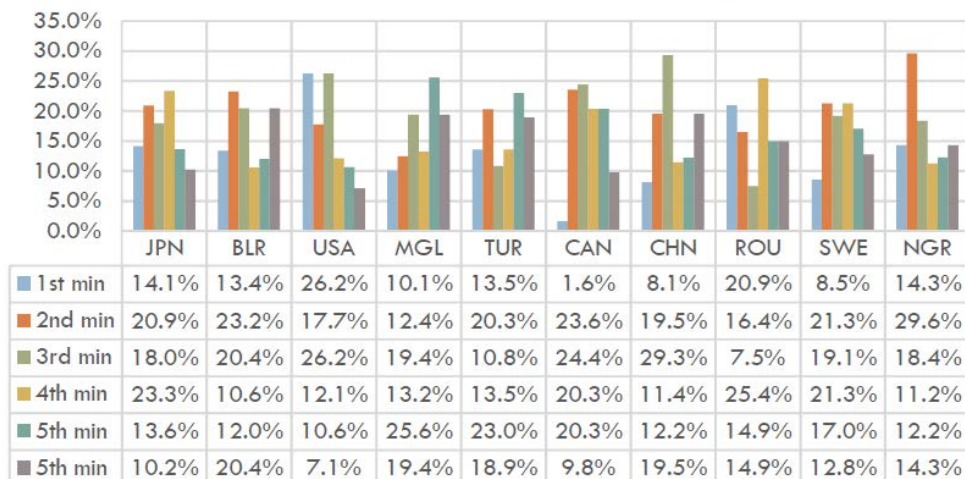


Highlights

- Japan, USA and Canada were the top teams in terms of 2 points scoring value, above 1pt/m.
- The higher scoring by 4 points moves were made by Romania, followed by China, both on 0.20 pts/m or above.
- Canada, Nigeria and Turkey gave more points due to 2 points actions than the other teams, over 0.70 neg. pts/m.
- Turkey, Belarus and Nigeria lost over 0.15pts/m due to 4pts actions.

Scoring Pace of Top 10 teams

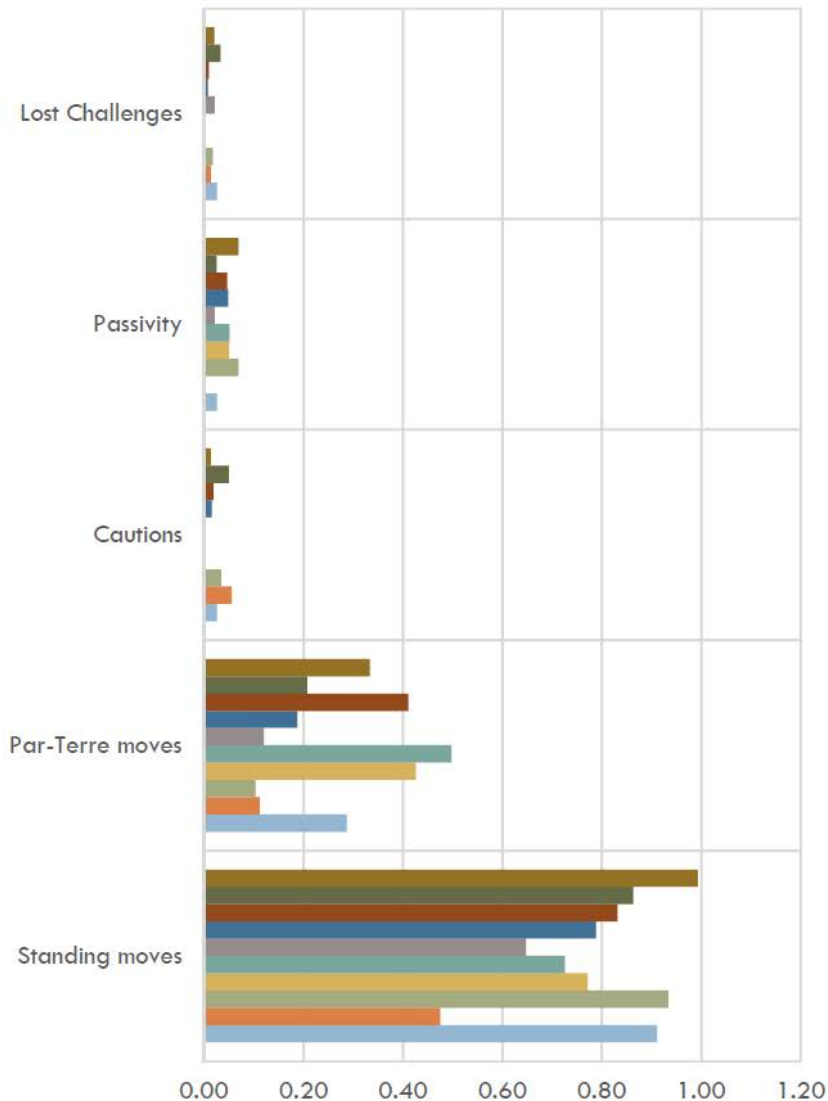
Figure 13 - Scoring Pace of Women's Wrestling Top 10 teams



Highlights

- As Team, USA wrestlers showed the best performance in first periods, highlighting their very first minute.
- Canada, China and Sweden were the teams who scored less during Minute 1.

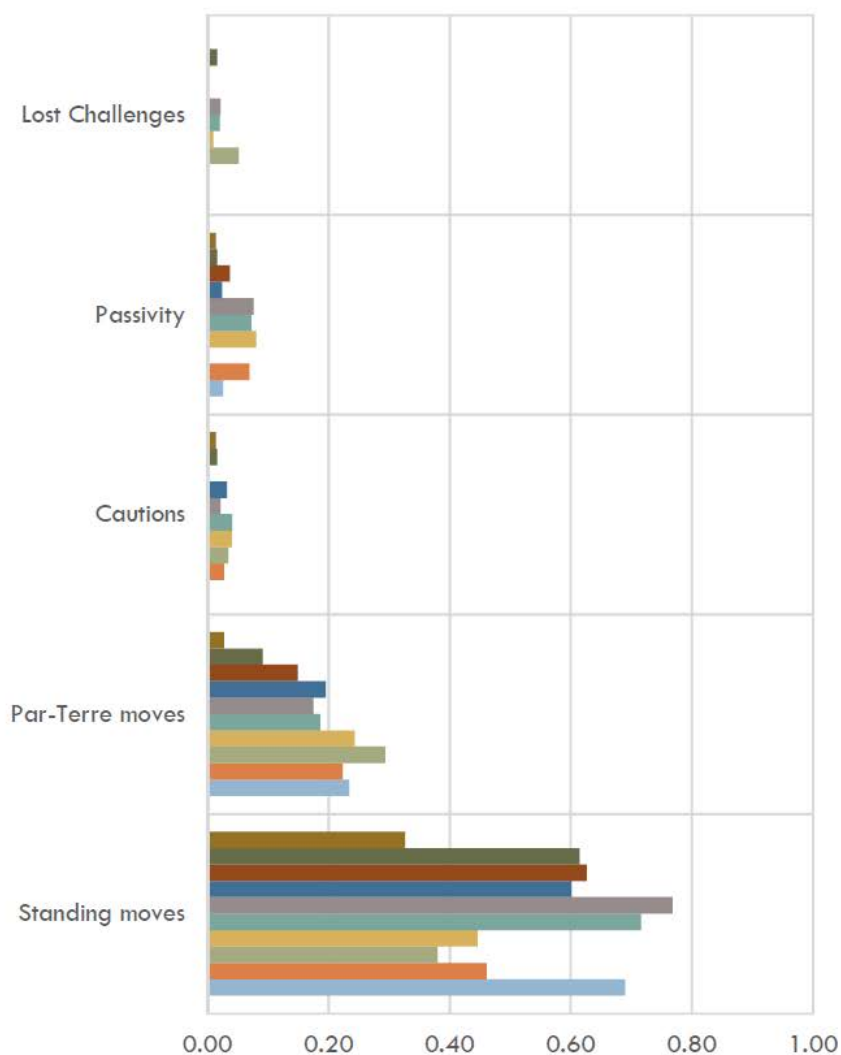
Figure 14 - Methods to score, Women's Wrestling, Top 10 teams



Highlights

- The highest value of points scored by technical moves on standing corresponds to teams Japan, Romania and Nigeria, all of them over 0.90 pts/m. Sweden and Turkey had the lowest values of this variable.
- Canada, China and USA scored more points in par-terre, over 0.40pts/m each.
- Mongolia, Romania and Sweden Teams scored 0.12pts/m or less in par-terre.
- Similarly, to Men's Freestyle, points earned by Cautions, Passivity and Lost Challenges contributed as a low percentage to total scoring

Figure 15 - Methods which Women's Wrestling, Top 10 teams lost points



Highlights

- Japan, Champion Team, had the best values of less points given by Standing and Par-terre moves.
- After Japan, Romania, China and Sweden lost less points in standing (less than 0.50 neg.pts/m), but these last three Teams were also among the 4 teams who lost more points on par-terre, overpassing 0.20pts/m.
- Regarding par-terre defense, al almost linear, increasing trend can be seen from 1st to 6th team ranked.
- First 4 teams ranked lost less than 0.04 pts/m due to passivity, while Turkey, Canada, China and Sweden lost between 0.07 and 0.08 pts/m. This suggests that Active Wrestling represents a clear trend related with the Team Ranking.
- Points given by Cautions and Lost challenge did not critically contribute to negative scoring. □ Points given by Cautions and Lost challenge did not critically contribute to negative scoring.

Figure 16 - Scoring Strategies, Standing Moves by Attack & Counterattack
Women's Wrestling, Top 10 Teams

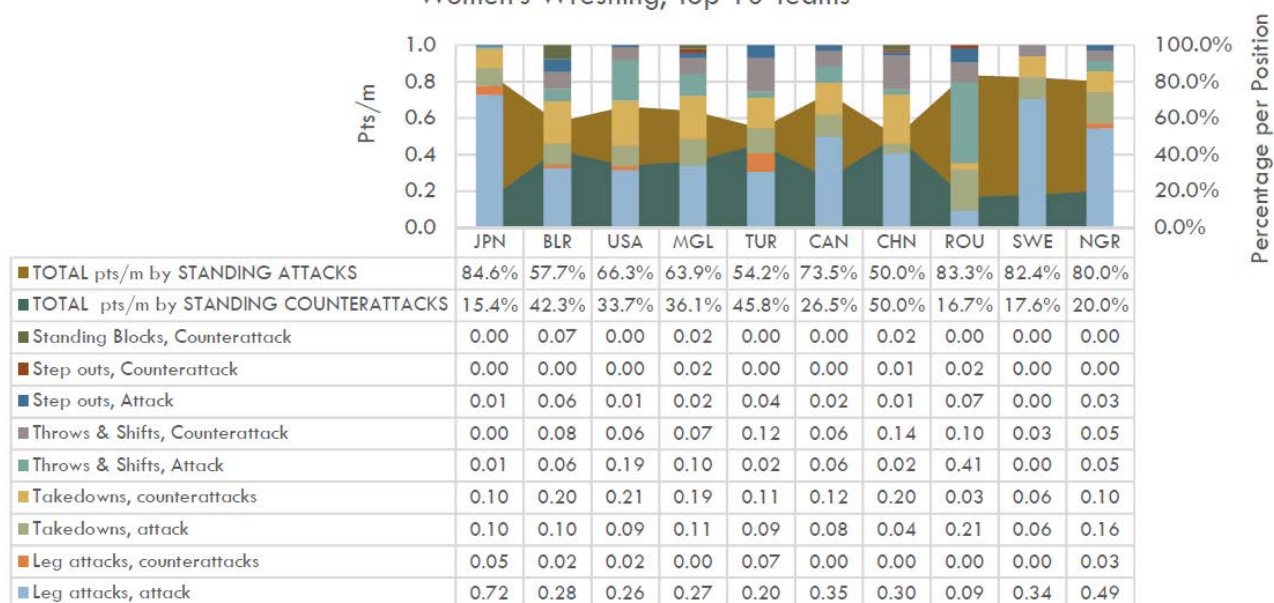
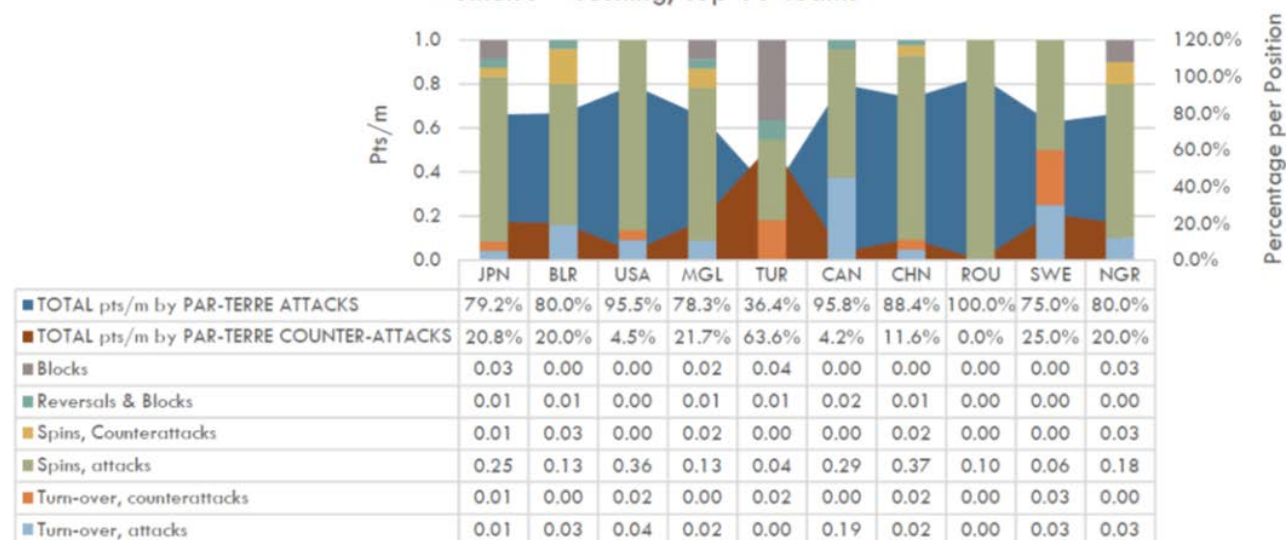


Figure 17 - Scoring Strategies, Par-terre Moves by Attack & Counterattack
Women's Wrestling, Top 10 Teams



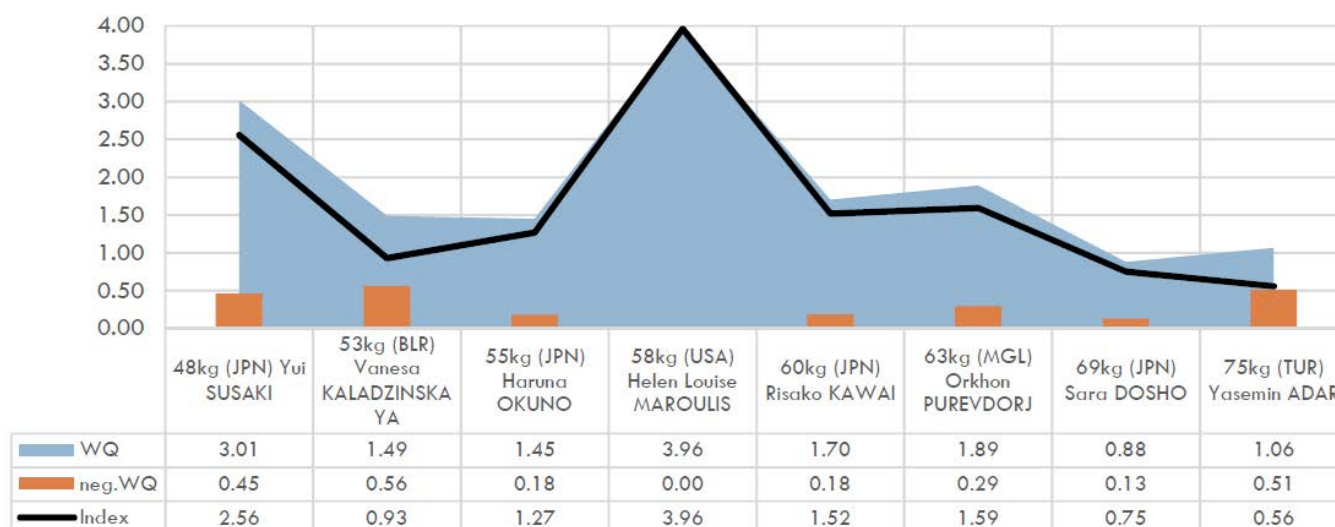
Highlights

- Japan scored more points by offensive leg attacks (0.72pts/m), followed by Nigeria (0.49pts/m) and Canada (0.35pts/m).
- Romania showed outstanding performance by using offensive Takedowns (0.21pts/m) while USA and Belarus reached similar values with counteroffensive Takedowns.
- With 0.41pts/m, Romania scored more points by offensive Shifts and Throws than the rest of teams.
- In par-terre, basically all teams scored the most of their points by spins

ANALYSIS OF WINNERS SCORING

Wrestling Efficacy (Wrestling Quality, Defense Stability, Efficacy Index)

Figure 18 - Wrestling Efficacy, Women's Wrestling Champions
(Wrestling Quality, Defense Stability, Efficacy Index)

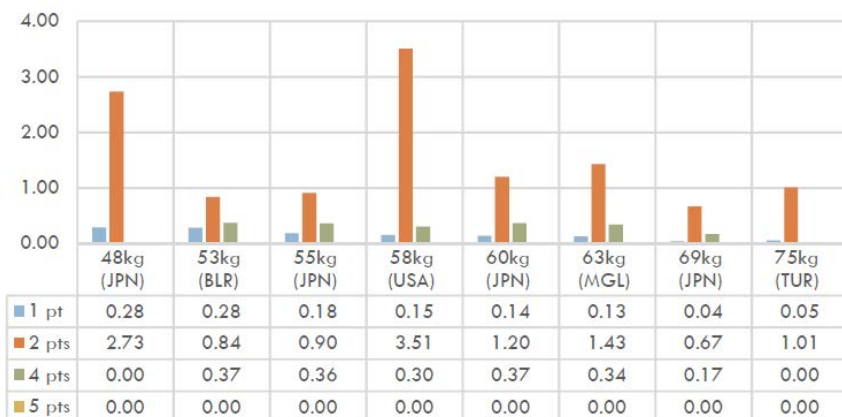


Highlights

- Susaki (JPN, 48kg) and Maroulis (USA, 58kg) scored more than 3 pts/m. Due to a perfect defense, the latter almost reached an Efficacy Index of 4pts/m.
- Champions from Belarus and Mongolia, as well as Japanese champions of 55kg and 60kg, had efficacy indexes around 1pts/m.
- 69kg and 75kg Champions had the lowest Efficacy Index among this group, with opposite strategies between them: Dosho (JPN) scored less than Adar (TUR) but the defense of the first one was quite good (0.13 neg.pts/m, the second best after Maroulis).

Distribution of points scored and lost by value, Women's Wrestling Champions.

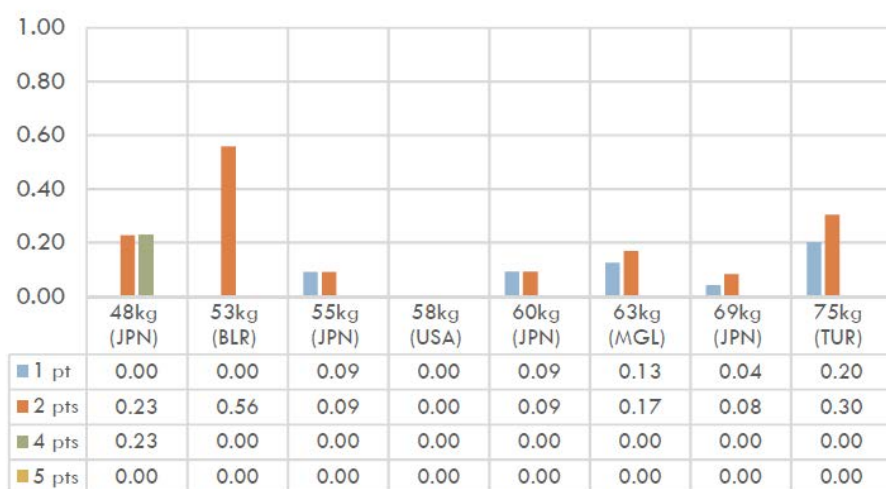
Figure 19 - Distribution of points scored by value
Women's Wrestling Champions



Highlights

- Maroulis and Susaki had outstanding performances scoring with 2points actions.
- 6 of 8 champions scored at least one 4 point move.

Figure 20 - Distribution of points lost by value
Women's Wrestling Champions

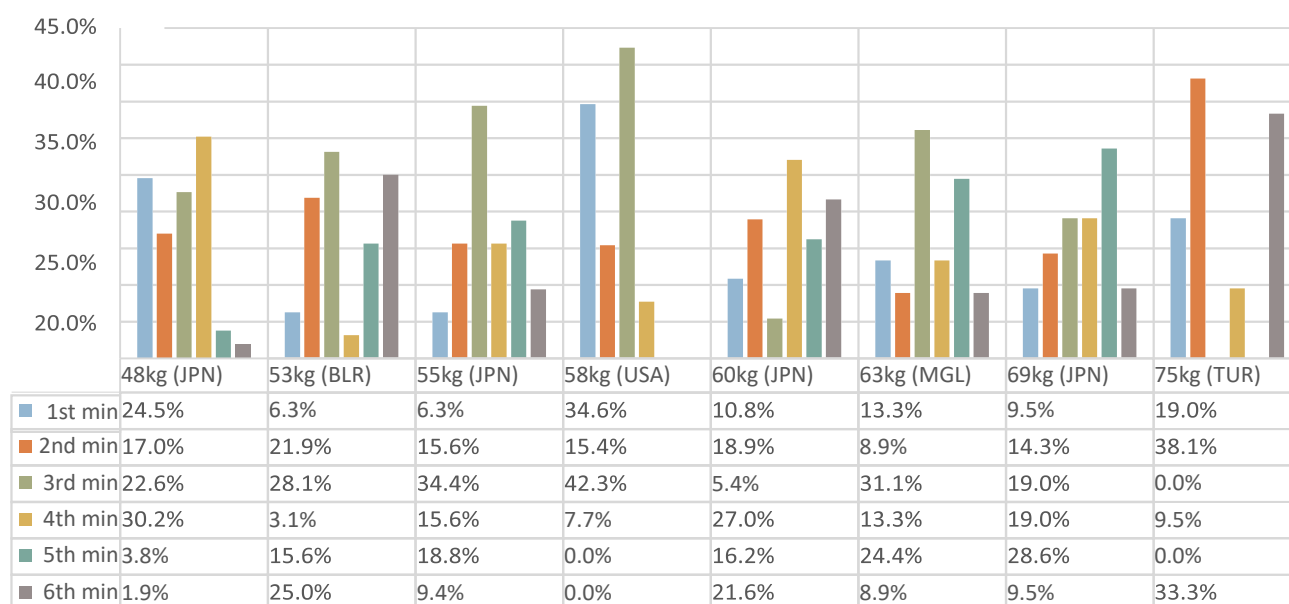


Highlights

- Almost all champions kept lost points below 0.30pts/m, excepting Kaladzinskaya (Belarus, 53kg), but this last was the only one not giving a single point with other values actions.

Scoring pace of Women's Wrestling Champions.

Figure 21 - Scoring Pace Women's Wrestling Champions



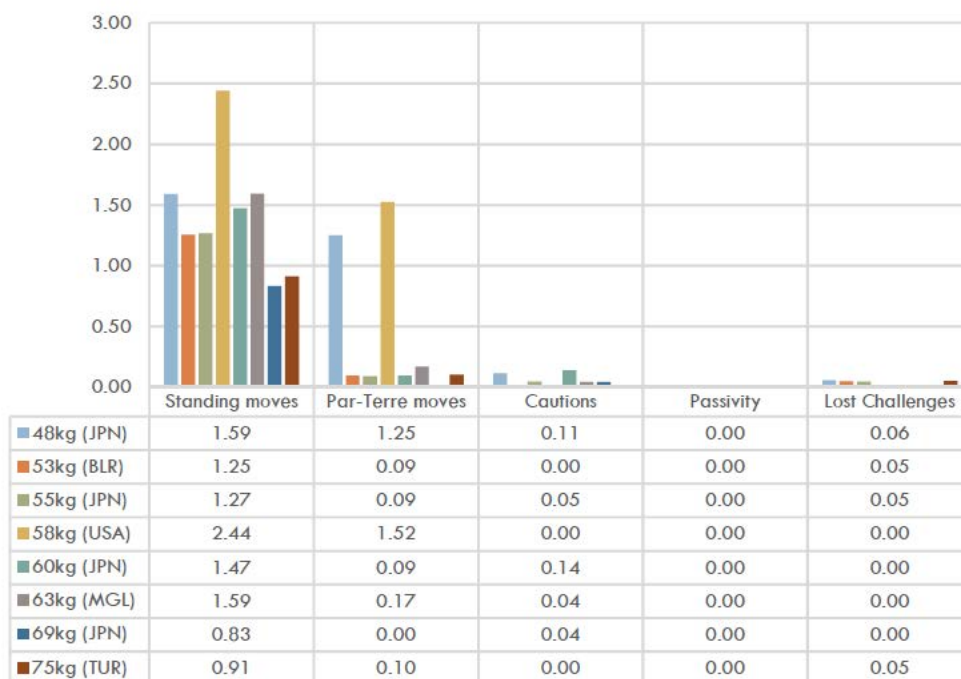
Highlights

- Champions of 48kg, 58kg and 75kg scored many points during Period 1. The Turkish did not score at all during minutes 3rd and 5th, but had a strong 6th min scoring 33% of her total earned points.
- Despite different scoring pace patterns, Champions from 48kg to 69kg showed consistent rhythm to score, and all 8 Champions scored at least 6.3% of their technical points in the 1st minute, which suggests an active wrestling behavior characterizes all of them.

Highlights

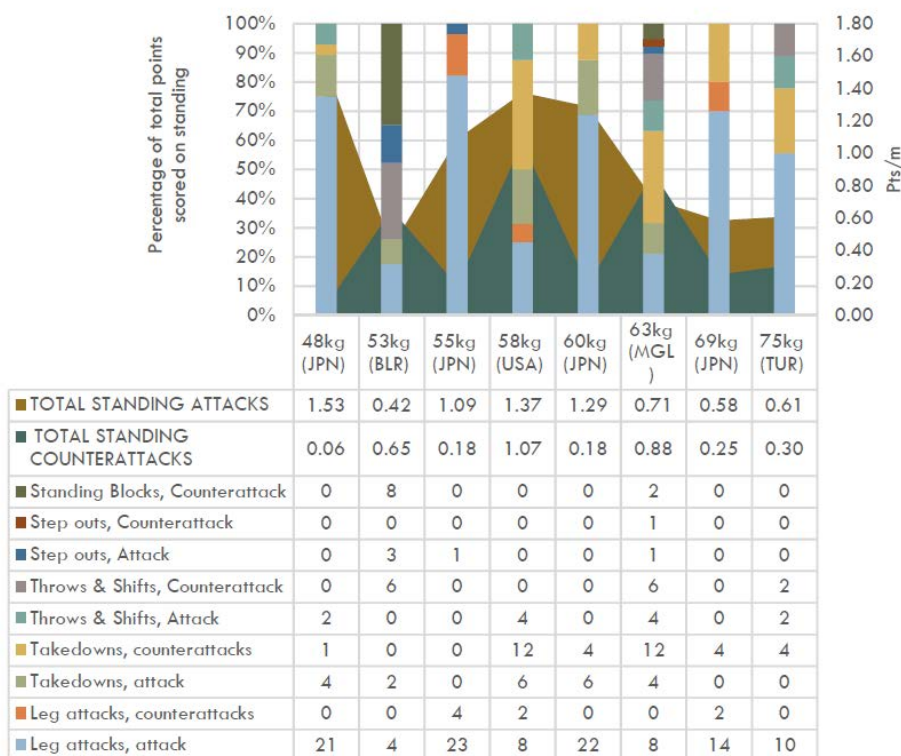
- No clear pattern was seen across weight classes regarding standing moves, except the highest weight classes, which scored less on standing than the others.
- The Top scorers, 48kg and 58kg champions were also the top scores in both standing and par terre.
- As mentioned before, contribution of penalizations were so low that suggests the champions shine due to their active wrestling.

Figure 22 - Methods to score, Women's Wrestling - Champions



Points scored by strategy and move, Women's Wrestling Champions

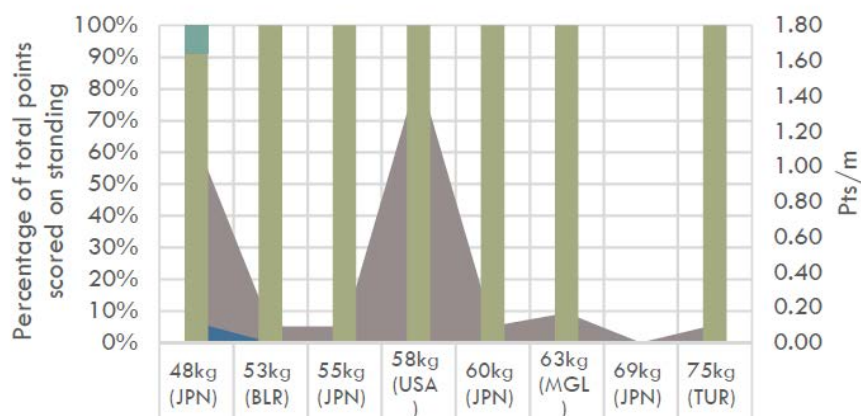
Figure 23 - Scoring Strategies, Standing Moves by Attack & Counterattack, Women's Wrestling Champions



Highlights

- Maroulis exposed her great technical capabilities on both offense and counter-offense moves in standing position.
- The other champions were outstanding one or another strategy: 48kg, 55kg, 60kg, 69kg and 75kg champions were much more active as attacking wrestlers, while 53kg and 63 kg. showed higher scoring based on standing counter-offensive moves.

Figure 24 - Scoring Strategies, Par-terre Moves by Attack & Counterattack, Women's Wrestling Champions



□ In par-terre, champions showed a specialization on spins. The only significant difference among them was the impressive offensive skills of Susaki and Maroulis (over than 1pts/m) as the rest of champions kept values below 0.10pts/m.



































SUMMARY























- Technically speaking there are similar trends between Men's Freestyle and Women's Wrestling, such as active wrestling minute by minute, technical preferred moves (Leg attacks and Spins), low contribution of Passivities and Cautions to the total scoring, and a constant scoring pace characterizing Gold Medalists.
- As past years, Women's Wrestlers score more points due to 4 points moves than Men's Freestylers.
- Counteroffensive takedowns were seen more during Women's Wrestling Tournament than Men's Freestyle.
- Women showed less technical diversity in par-terre than Men's freestyle in this Championships.
- Unlike Men's Freestyle champions, Women's Wrestling gold medalists scored more points in the very 1st minute of matches

MENS FREESTYLE









































268 bouts were analyzed which were contested by the 233 competitors representing 56 national teams who took part of the tournament. 1465 scoring events awarded with technical points during the tournament were categorized.

















PARTICIPANTS BY TEAM AND WEIGHT CATEGORY

	Teams	125 kg	57 kg	61 kg	74 kg	97 kg	65 kg	70 kg	86 kg	TOTAL
1	 ALB	1	0	0	0	0	0	0	0	1
2	 ARM	0	1	1	1	1	0	0	0	4
3	 AUS	0	0	0	1	0	1	0	0	2
4	 AUT	0	0	0	1	0	0	0	0	1
5	 AZE	0	1	1	1	1	1	1	1	7
6	 BLR	0	1	1	1	1	1	1	0	6
7	 BRN	0	0	0	0	0	1	0	0	1
8	 BUL	0	1	1	1	0	1	1	1	6
9	 CAN	1	1	1	1	0	1	1	1	7
10	 CHN	1	1	1	1	1	1	1	0	7
11	 COD	0	0	0	0	0	0	0	1	1
12	 COL	0	0	0	0	0	0	1	1	2
13	 CUB	0	0	1	1	1	1	0	1	5
14	 DOM	0	1	1	0	1	1	0	0	4
15	 EGY	1	0	0	0	0	0	0	0	1
16	 ESP	0	1	0	1	0	0	0	1	3
17	 EST	0	0	0	0	1	0	0	0	1
18	 FIN	1	0	0	0	0	0	0	1	2
19	 FRA	0	1	1	0	1	1	1	1	6
20	 GEO	0	1	1	1	0	0	1	1	5
21	 GER	0	0	1	1	1	1	1	1	6
22	 GRE	0	0	0	1	1	0	0	0	2
23	 GUM	0	0	1	0	0	0	0	0	1
24	 HUN	0	0	1	0	0	1	1	1	4
25	 IND	1	1	1	1	1	1	1	1	8
26	 IRI	1	1	0	1	1	1	1	1	7
27	 ISR	0	1	0	1	0	0	1	1	4
28	 ITA	0	1	0	0	0	0	1	0	2
29	 JPN	1	1	1	1	1	1	1	1	8
30	 KAZ	1	1	1	1	1	1	1	1	8
31	 KGZ	1	1	1	1	0	0	1	1	6
32	 KOR	1	1	1	1	1	1	1	1	8
33	 LTU	0	0	0	0	0	0	0	1	1
34	 MAR	0	1	0	0	0	0	0	1	2

Teams		125 kg	57 kg	61 kg	74 kg	97 kg	65 kg	70 kg	86 kg	TOTAL
35	 MDA	1	1	0	1	1	1	0	1	6
36	 MGL	1	1	1	1	1	1	1	1	8
37	 MKD	0	1	1	0	1	0	0	0	3
38	 NGR	0	0	0	0	0	1	1	0	2
39	 NRU	0	0	1	0	0	0	0	0	1
40	 NZL	0	0	0	1	0	0	0	1	2
41	 PER	0	0	0	0	0	1	0	1	2
42	 PLW	1	0	1	0	0	0	0	0	2
43	 POL	1	0	0	1	1	1	0	0	4
44	 PRK	0	1	1	0	0	1	0	0	3
45	 PUR	0	0	0	0	0	0	0	1	1
46	 QAT	0	0	0	0	0	1	0	0	1
47	 ROU	0	1	1	0	0	0	1	0	3
48	 RUS	1	1	1	1	1	1	1	1	8
49	 SLO	0	0	0	0	0	1	0	0	1
50	 SVK	1	0	1	0	0	0	0	1	3
51	 TJK	0	0	0	1	0	0	0	0	1
52	 TPE	0	0	0	0	0	0	0	1	1
53	 TUR	0	1	1	0	1	1	1	0	5
54	 UKR	1	1	1	1	1	1	1	1	8
55	 USA	1	1	0	1	0	1	0	1	5
56	 UZB	1	1	0	0	0	0	1	1	4
TOTAL		24	29	31	31	26	31	27	34	233

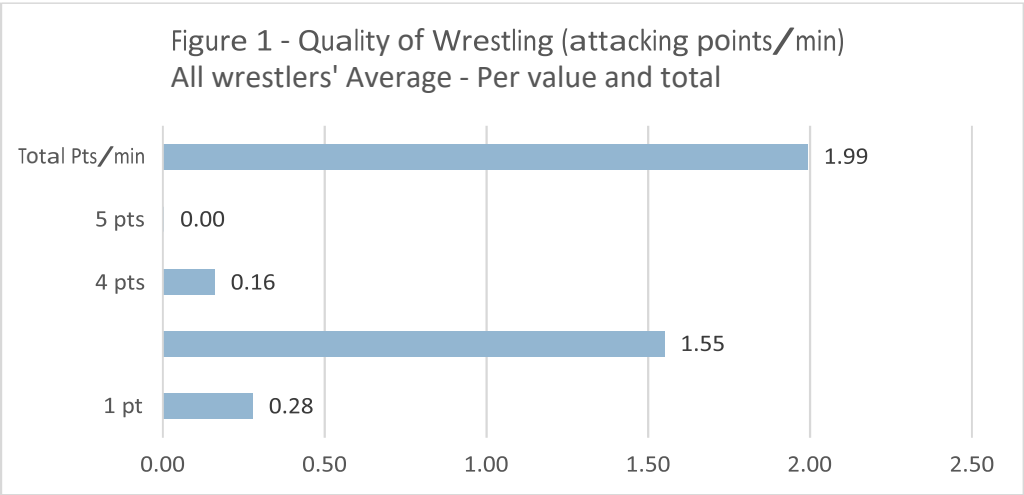
SENIORS MEN'S FREESTYLE WRESTLING TEAM RANKING (Classification Points by Weight Class)

Rank	Team	125 kg	57 kg	61 kg	74 kg	97 kg	65 kg	70 kg	86 kg	TOTAL
1	 UNITED STATES	8	9		10	10		9	8	54
2	 RUSSIA	6		9	9	9	8	4	8	53
3	 GEORGIA	10		8		6	10	6		40
4	 TURKEY	9		6	8		6	6	4	39
5	 AZERBAIJAN			10	6	8	2		6	32
6	 JAPAN	1	10	6	3			8		28
7	 CUBA			8	4		8		3	23
8	 KAZAKHSTAN			4		6		8		18
9	 IRAN	2					1	3	10	16
10	 ARMENIA	8				8				16
11	 BELARUS				8		6			14
11	 MONGOLIA	6	8							14
13	 BULGARIA		6						6	12
14	 ITALY		1					10		11
15	 POLAND						9		2	11
15	 SLOVAKIA			2					9	11
17	 UZBEKISTAN		3		6			1		10
18	 UKRAINE		8	1						9
19	 DPR KOREA		6							6
20	 INDIA		4			2				6
21	 MOLDOVA					4			1	5
22	 KOREA		2			3				5
22	 ROMANIA			3				2		5
24	 BAHRAIN						4			4
24	 CANADA	4								4
26	 KYRGYZSTAN	3								3
26	 PUERTO RICO						3			3
28	 FRANCE				2					2
29	 ISRAEL				1					1
29	 MACEDONIA ANC. R. YUG					1				1
31	 ALBANIA									0
31	 AUSTRALIA									0
31	 AUSTRIA									0
31	 CHINA									0
31	 CONGO DR									0
31	 COLOMBIA									0
31	 DOMINICA									0
31	 EGYPT									0
31	 SPAIN									0
31	 ESTONIA									0

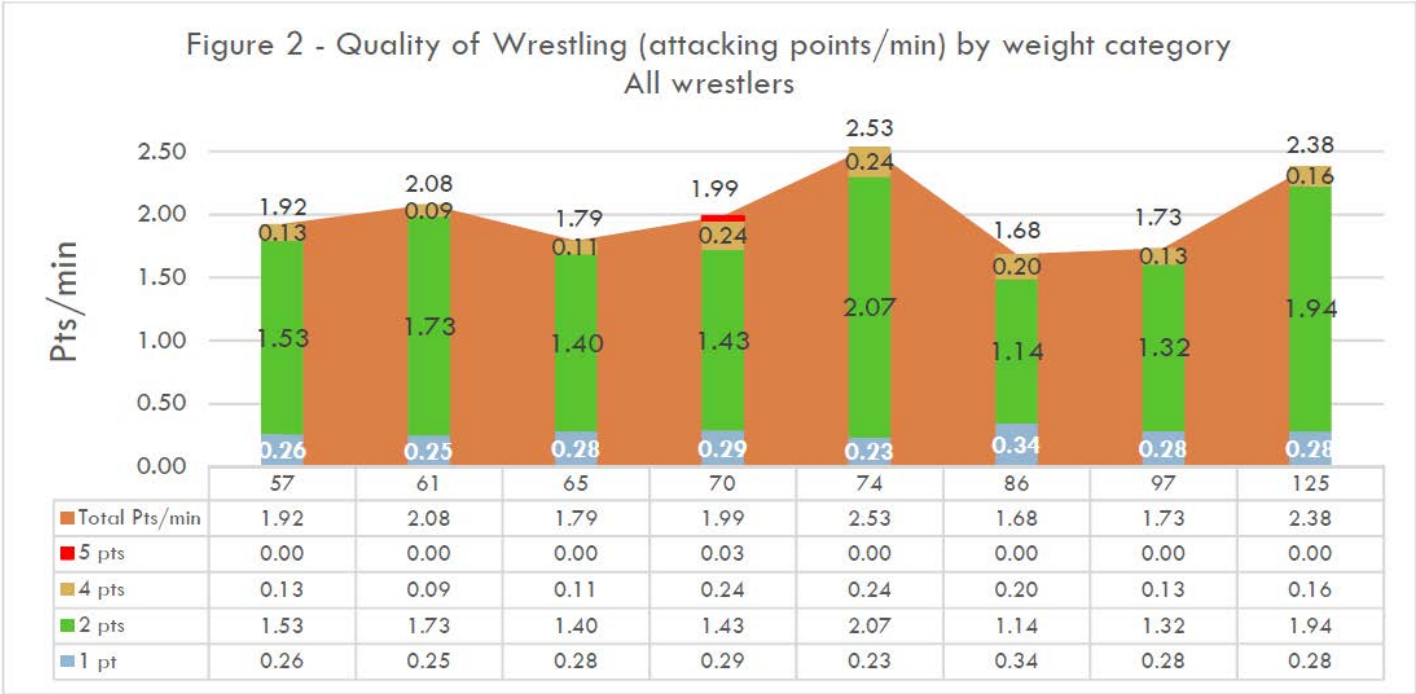
Rank		Team	125 kg	57 kg	61 kg	74 kg	97 kg	65 kg	70 kg	86 kg	TOTAL
31		FINLAND									0
31		GERMANY									0
31		GREECE									0
31		GUAM									0
31		HUNGARY									0
31		LITHUANIA									0
31		MOROCCO									0
31		NIGERIA									0
31		NAURU									0
31		NEW ZEALAND									0
31		PERU									0
31		PALAU									0
31		QATAR									0
31		SLOVENIA									0
31		TAJIKISTAN									0
31		TAIPEI CHINESE									0

SCORING BREAKDOWN, ALL WRESTLERS

Quality of Wrestling



Quality of Wrestling by Weight Category

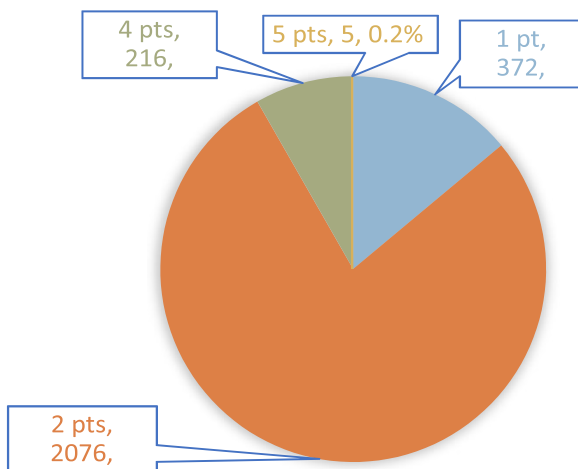


Highlights

- The 2017 value of 1.99 pts/m equals an average of one technical move every minute on mat.
- The most frequently seen value was 2 pts (1.55 pts/minute on mat were scored by this value), while 4 and 5 points moves were barely seen during this men’s freestyle tournament.
- 74kg and 125kg were the most active (over 2.3 pts/m.) while 86kg wrestlers reached the lowest value (1.73 pts/m).

Points scored per value – Total and Percentage

Figure 3 - Pts Scored Per Value - All Wrestlers



Highlights

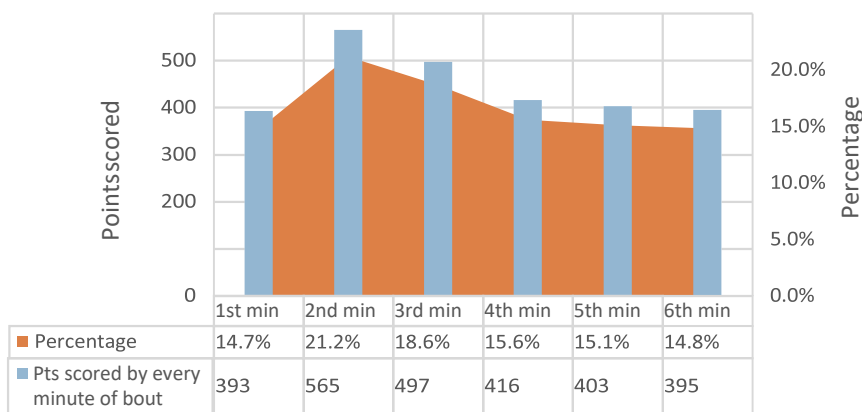
- 2669 technical points were scored along men's freestyle tournament, from which almost 78% were 2 pts actions.
- 4 points actions reached 8% of the total scored points, while 5 pts actions were almost not seen.

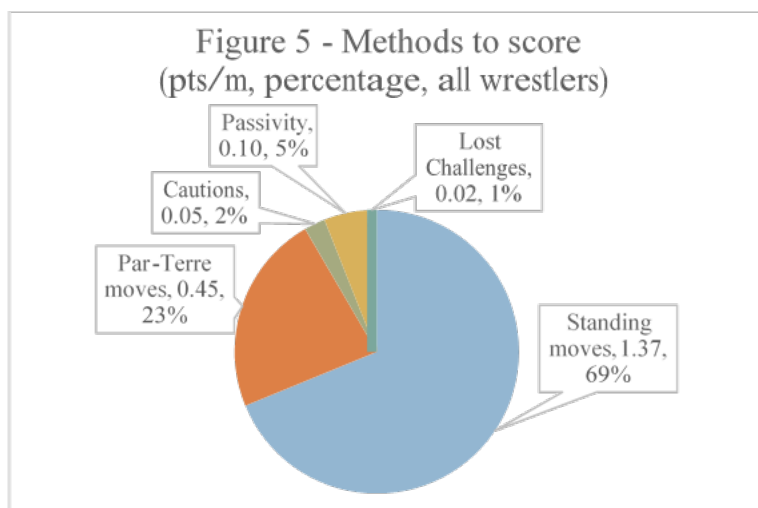
Scoring pace - Points scored minute by minute.

Highlights

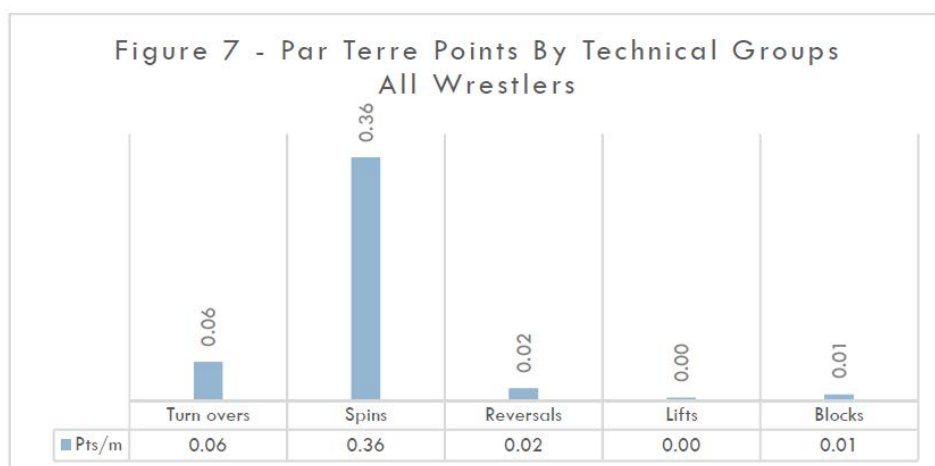
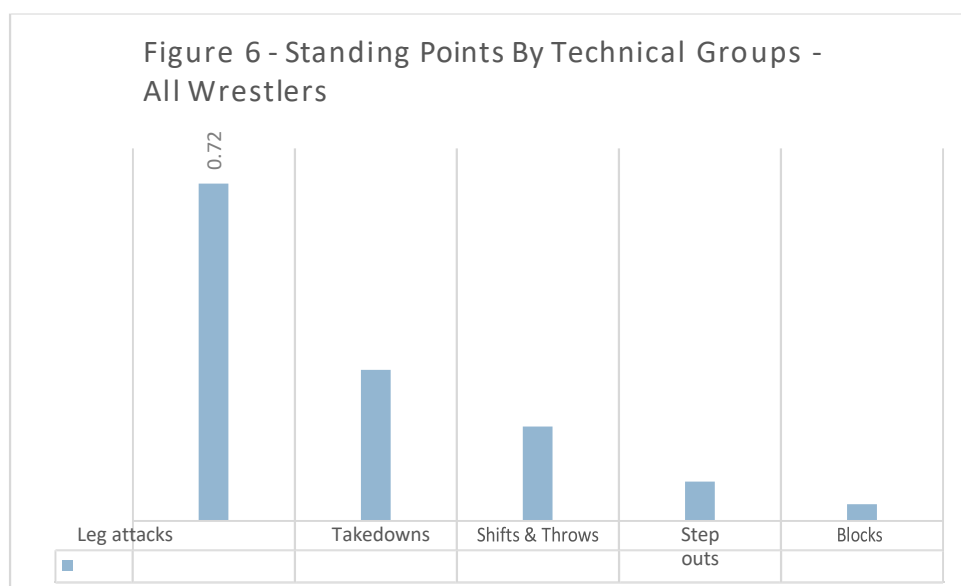
- Overall, wrestlers' minute by minute activity was constant, ranging from almost 15% to a bit over 21%.
- Second minute of match registered the highest percentage, which could be explained by the activity encouraging rules.

Figure 4 - Scoring Pace (points scored by every minute of match)
All wrestlers





Breakdown of Scoring by Technical Groups



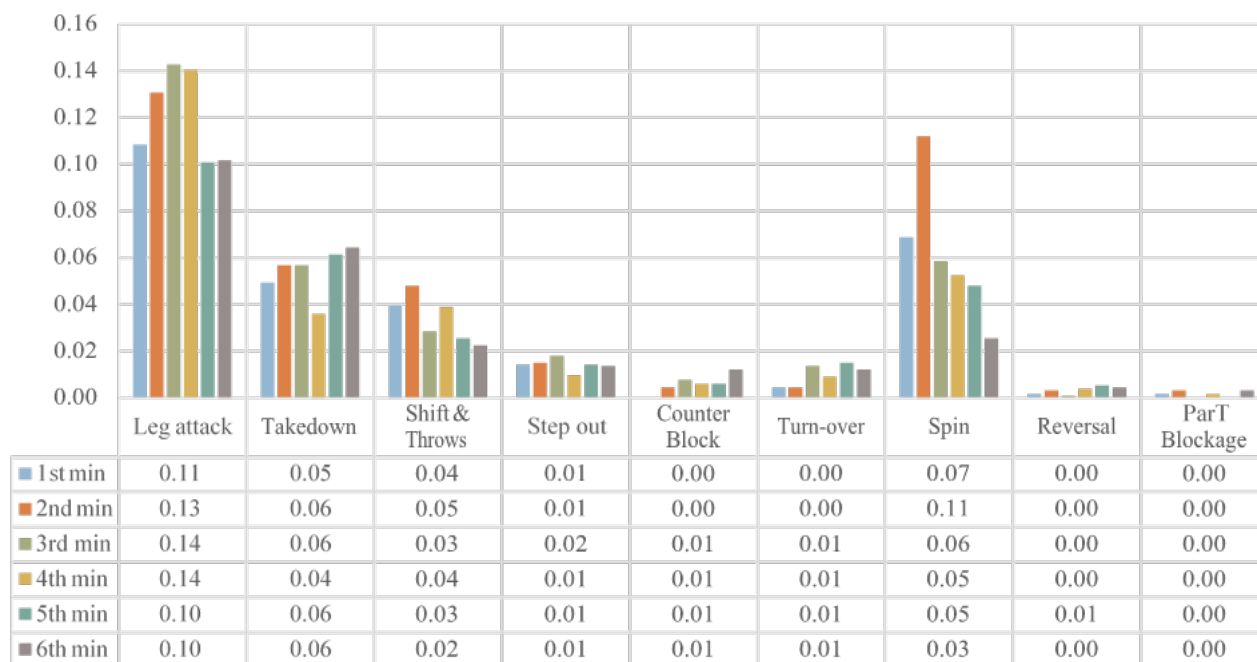
Highlights

- Standing moves were the most used method to score. Altogether with Par- Terre moves, technical actions were the way to score about 90% of the total points awarded.
- Low contribution of penalizations to the total scoring shows that the current rules allows wrestlers to decide bouts by themselves, consolidating the changes

Highlights

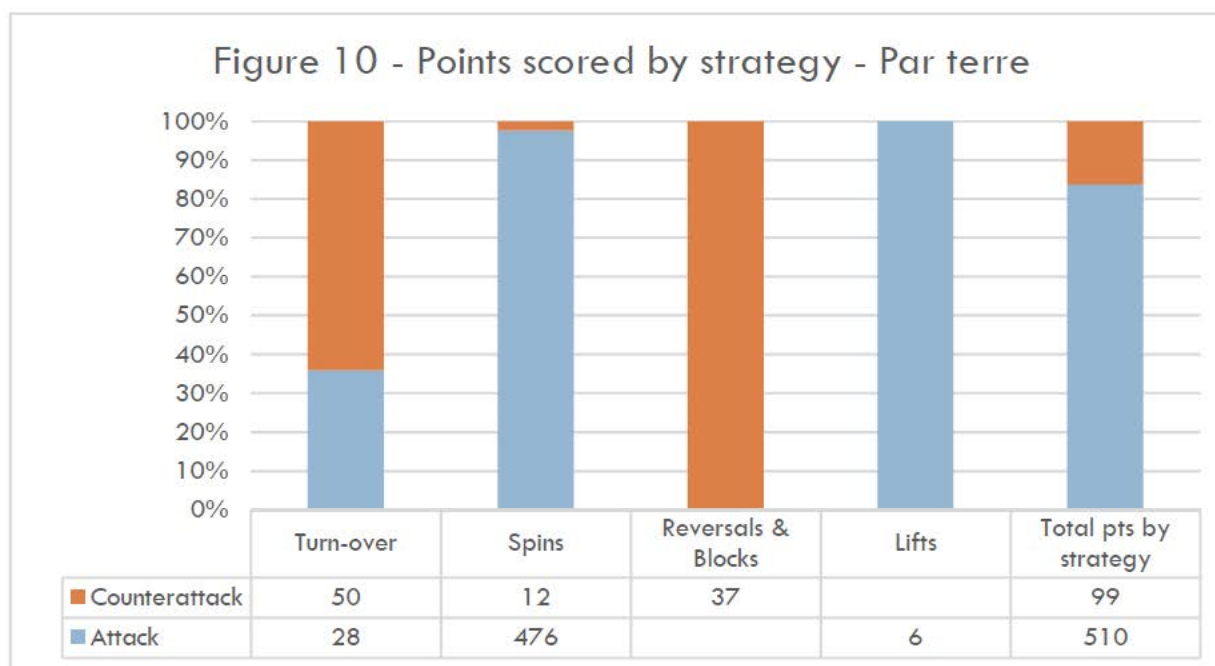
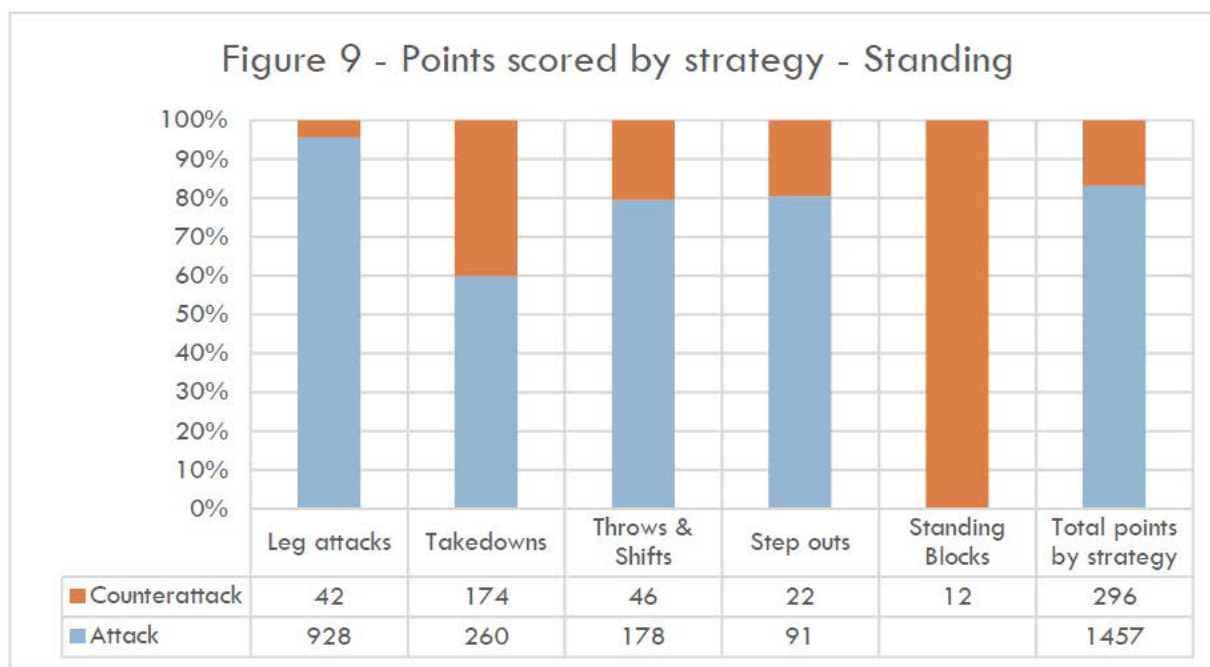
- No surprise that leg attacks were the most recurrent technical group on Men's freestyle. The second most often seen technical group was par terre spins (i.e. Gut Wrenches, Ankle Laces), even over standing takedowns.
- Step-outs low contribution points that the current rule to assess these moves are good to motivate wrestlersto score more through real techniques.
- Par terre arsenal keep a decreasing trend along the last years.

Figure 8 - Points scored by Technical Moves minute by minute Men's freestyle - All Wrestlers



Highlights

- Almost all technical groups were registered at least once in every one of the 6 min.
- Usually, a technical group frequency decreases along the last 3 min. of match as high-level wrestlers win by technical superiority. This is the case of Leg Attacks, Shifts & Throws and Spins.
- It is noticeable that Takedown frequency along the matches showed the opposite trend (increasing as the match approached the final minute). Likely these were counterattacks against leg attacks.
- In par-terre, turn-over frequency increased in second periods, nevertheless, as mentioned previously, its contribution to overall scoring was too low to be considered significant.

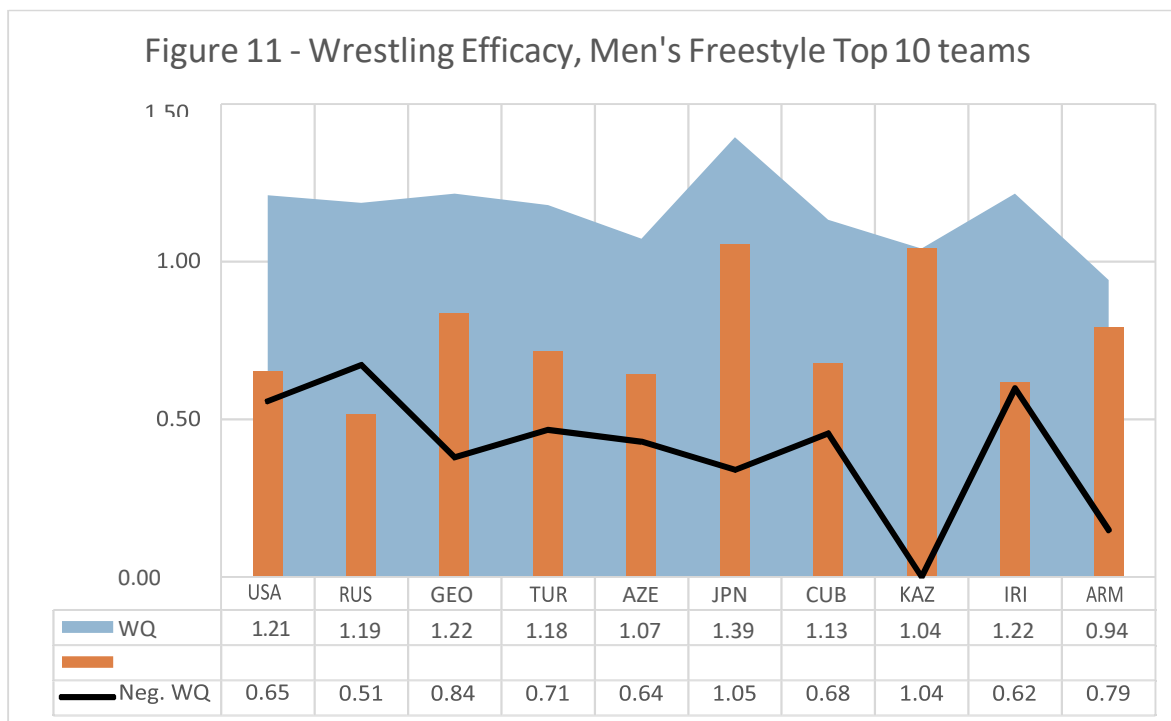


Highlights

- Overall, offensive strategies were the clear trend during the tournament.
- On standing, all the technical groups excepting blockages (to hold the opponent while he was attempting a standing move) were used mostly as attacking moves.
- On the other hand, despite attack moves representing more than 80% of the total scoring on par-terre, most of the turn over moves (techniques to pin the opponent) were made as counterattack resource, often against leg attacks (example: front cradles, crotch lifts) as well as reversals and par terre blockages.

PERFORMANCE OF TOP 10 TEAMS

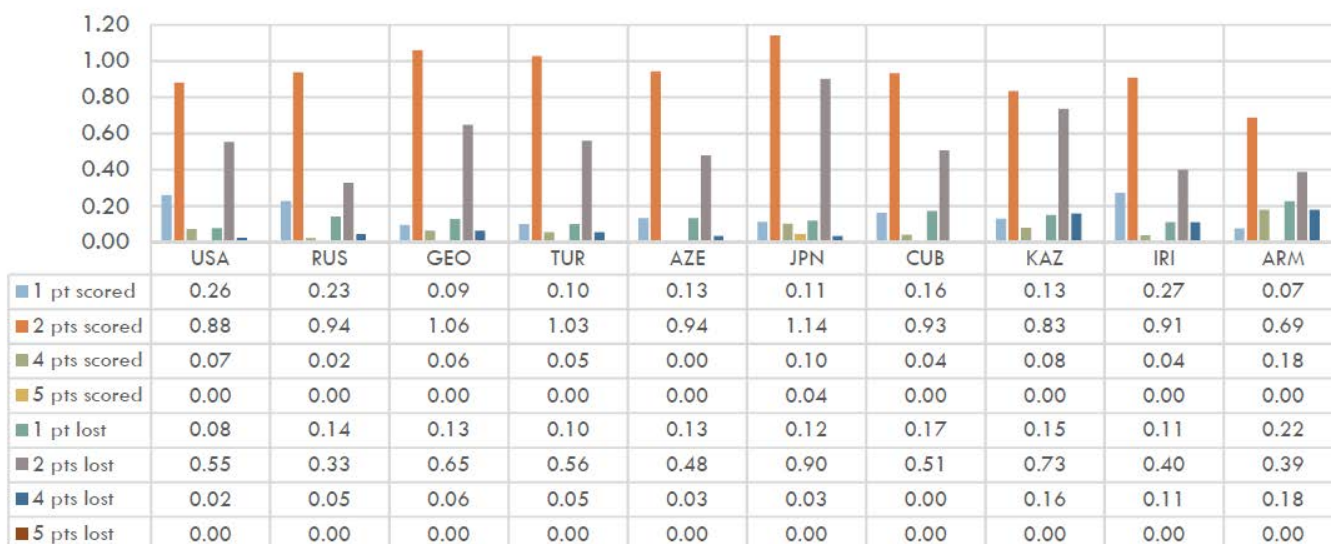
Wrestling Efficacy (Wrestling Quality, Defense Stability, Efficacy Index)



Highlights

- The difference between points scored per minute on mat (Wrestling Quality or WQ) and Points lost per minute on mat (Defense Stability or neg. WQ) results Efficacy Index. The higher the gap between WQ and neg. WQ, the higher and better efficacy index (Tünnemann, 2016).
- Team Champion USA improved its Efficacy index (0.56 pts/m) by increasing its scoring performance while keeping their defense stability in comparison with World Championships 2015, where they ranked 7th with WQ=0.81, neg. WQ=0.61, index= 0.20 (Tünnemann, 2016).
- Russia (2nd) and Islamic Republic of Iran (9th) reached the highest values of Efficacy Index, but these 2017 values were lower than 2015, where Russia got index=1.28 and Iran got index=0.77
- Georgian, Turkey, Azerbaijan and Cuba had good performances thanks to an efficient gap between their attack and defense capabilities.
- Japan had the best WQ among Top 10 teams, but its Defense Stability value was far from the first 5 teams ranked.
- Kazakhstan and Armenia teams scored almost as many points as they lost during the tournament.

Figure 12 - Points scored per Value, Top 10 teams, Men's Freestyle (pts/m)

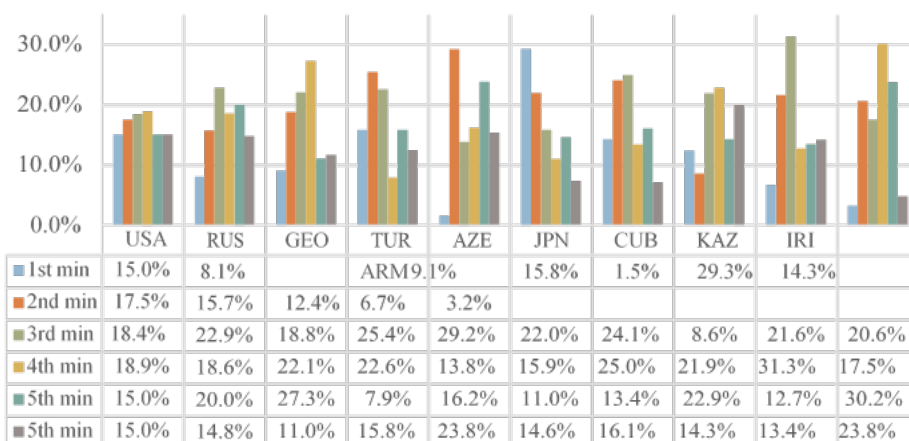


Highlights

- 70% to 90% of the points scored by all Top 10 teams were made by 2 points actions.
- Iran scored more points with 1 point value (0.27 pts/m) than any other of these teams.
- 4 pts actions were not significant in terms of contribution to the overall performance as Teams. Not asingle 5 points move was scored by this sample of wrestlers.
- Georgia, Turkey and Japan scored more points by 2 points actions (over than 1 pt/m). The last one was also who lost more points due to 2 points actions.
- Cuba, Kazakhstan and Armenia lost more points due to 1 point actions, and the last two also lost more points due to 4 point moves than the rest of the Top 10.

Scoring Pace of Top 10 teams

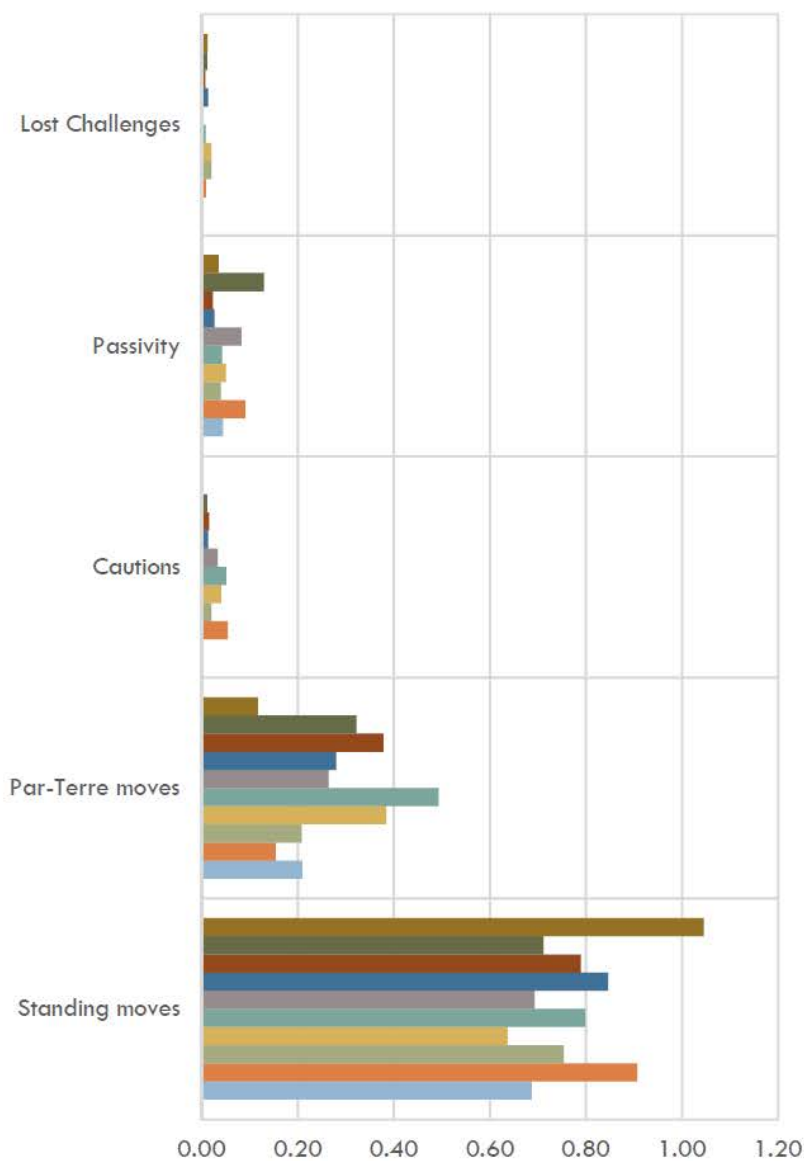
Figure 13 - Scoring Pace of Top 10 teams



Highlights

- USA team had the best consistent scoring pace minute byminute, while the other 9 teams had ups and downs Could be inferred that the scoring pace min. by min. could explain the final team ranking.

Figure 14 - Methods to score, Men's Freestyle
Top 10 teams



	Standing moves	Par-Terre moves	Cautions	Passivity	Lost Challenges
USA	1.05	0.12	0.00	0.04	0.01
RUS	0.71	0.32	0.01	0.13	0.01
GEO	0.79	0.38	0.02	0.02	0.01
TUR	0.85	0.28	0.01	0.03	0.01
AZE	0.69	0.26	0.03	0.08	0.00
JPN	0.80	0.49	0.05	0.04	0.01
CUB	0.64	0.38	0.04	0.05	0.02
KAZ	0.75	0.21	0.02	0.04	0.02
IRI	0.91	0.15	0.05	0.09	0.01
ARM	0.69	0.21	0.00	0.04	0.00

Highlights

- The highest value of points scored by technical moves from standing corresponds to USA, followed by Iran and Turkey. Cuba had the lowest value of this variable.
- By contrast, USA and Iran had the lowest values of Par-terre wrestling scoring. Japan and Cuba had the top values.
- First 4 teams ranked had the lowest values of points won by cautions, presumably due to their offensive, technical, proactive behavior.
- Three of the first 4 teams ranked (USA, Georgia and Turkey) won less points by passivity than the others. A potential explanation is, they scored their points in the first two minutes by being active regarding technical moves.
- Points by lost challenges were not significant to the overall contribution to scoring among these teams.

Highlights

- Russia was the best team regarding points given by Standing and Par-terre moves, along with Azerbaijan, Cuba and Iran. Kazakhstan and Japan were the teams who gave more points from Standing stance. USA, Georgia and Turkey showed good enough levels of standing defense.
- Japan lost more points by par-terre moves than the rest of the Top 10 teams.
- First 4 teams ranked points lost by passivity values increase as the ranking goes down. This suggests Active Wrestling represents a clear trend related with the Team Ranking among those Teams.
- Points given by Lost challenge did not critically contribute to negative scoring.

Figure 14 - Methods to score, Men's Freestyle
Top 10 teams

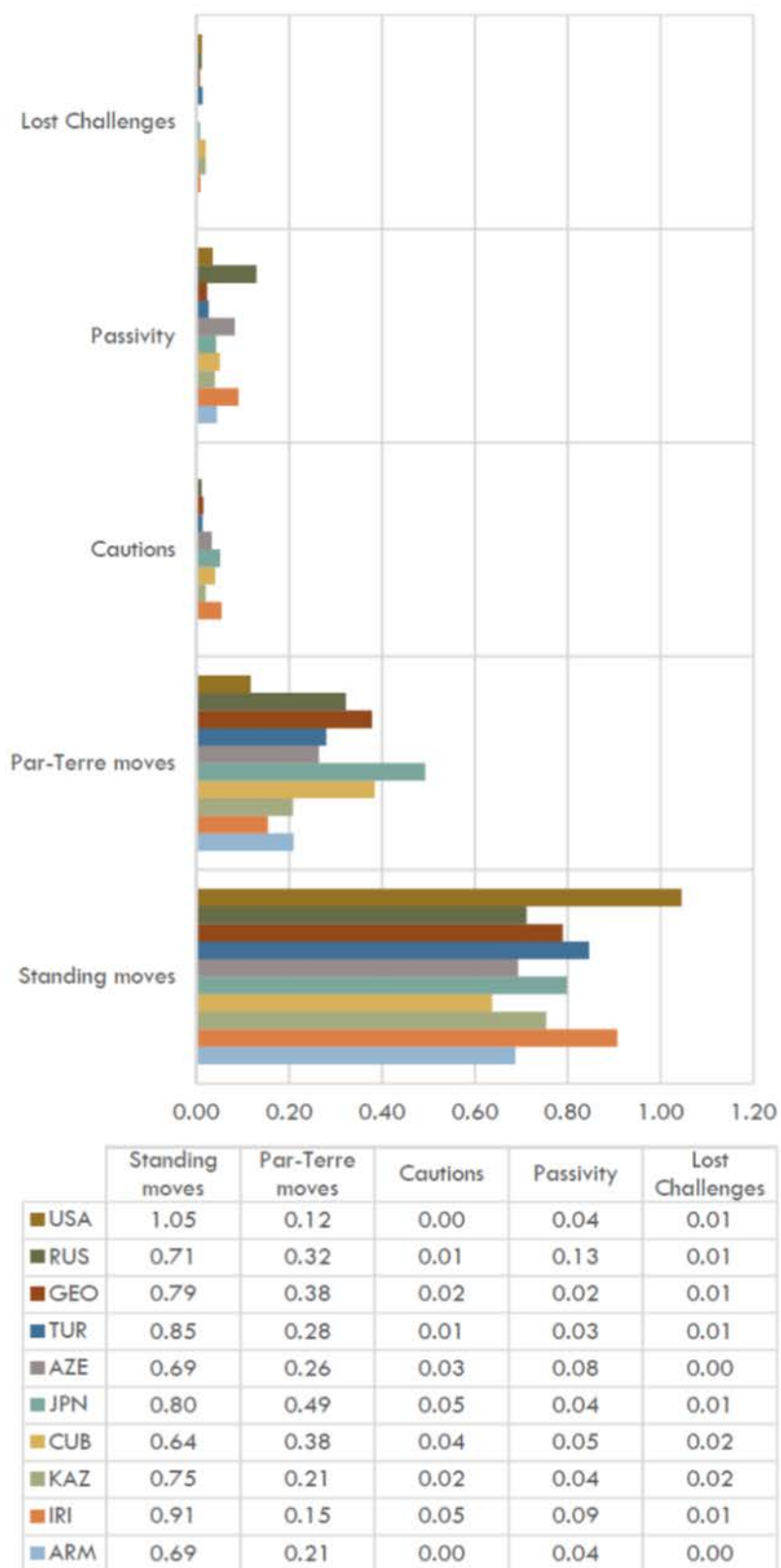


Figure 16 - Scoring Strategies, Standing Moves by Attack & Counterattack
Men's freestyle, Top 10 Teams

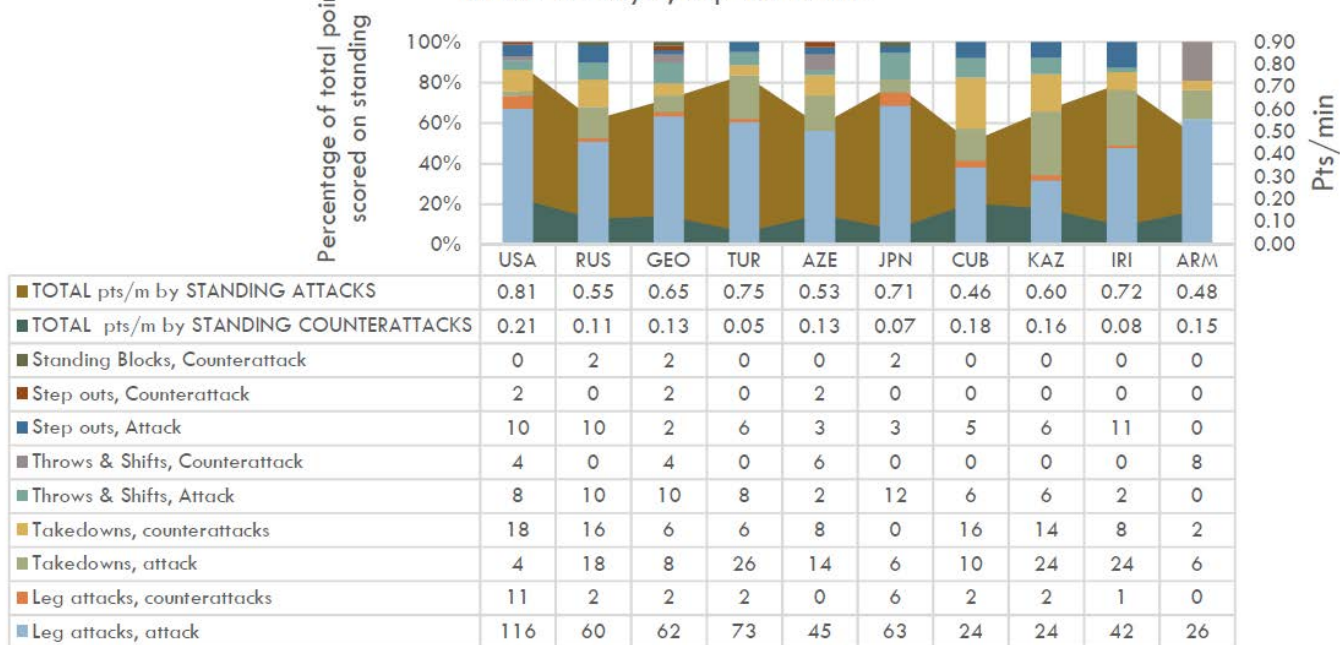
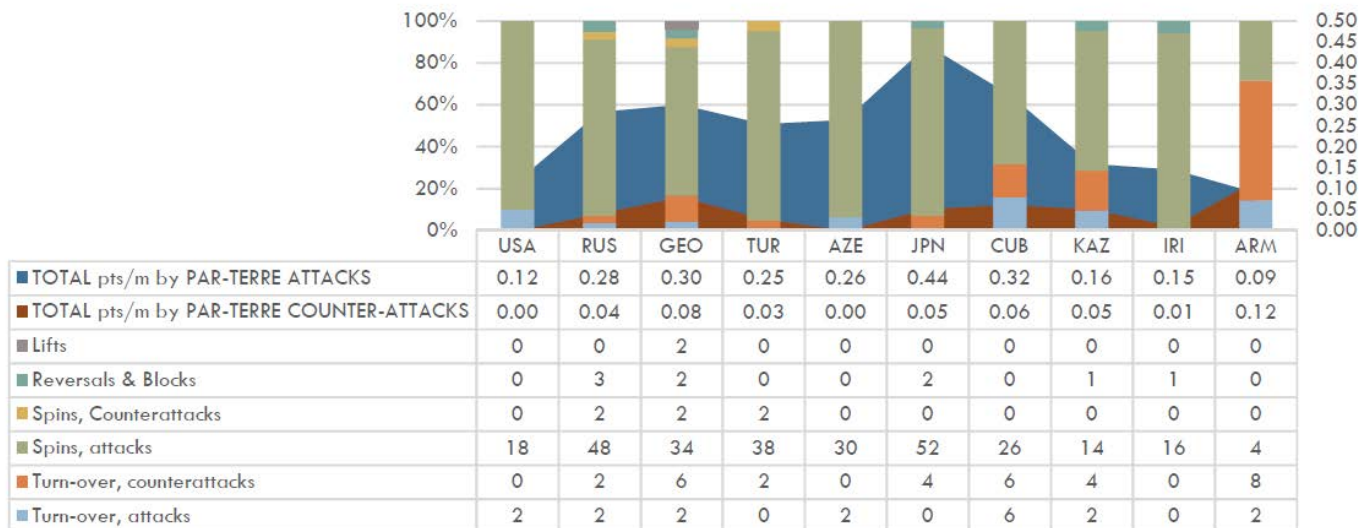


Figure 17 - Scoring Strategies, Par-terre Moves by Attack & Counterattack
Men's freestyle, Top 10 Teams



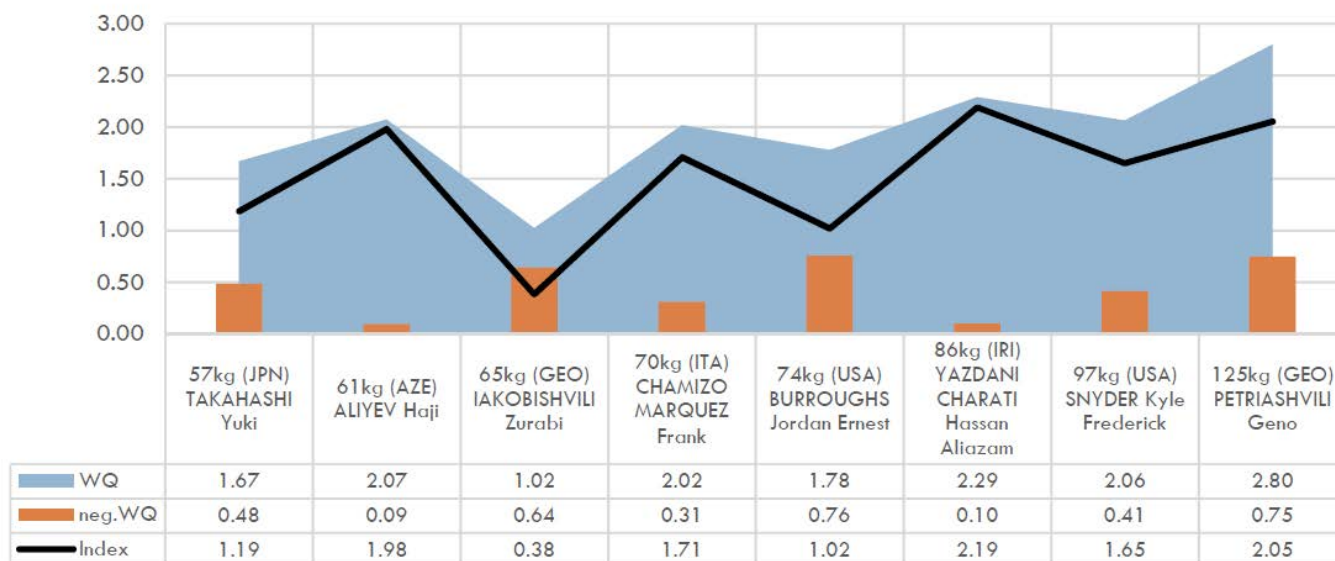
Highlights

- The first team ranked, USA, scored more points/min. than the other teams by both attack and counterattack moves in standing, showing high values of leg attacks executed as attack and counterattack (re-shots) and counteroffensive takedowns against leg attacks.
- Russian, Azerbaijan, Cuba, Iran and Kazakhstan scored many points by Counteroffensive takedowns but their offense leg attack scoring were lower than USA.
- By contrast, USA scored less on par-terre than the rest of Top 10 teams. The best technical richness in this position was shown by Russia and Turkey, while Japan scored more par-terre points overall.

ANALYSIS OF WINNERS SCORING

Wrestling Efficacy (Wrestling Quality, Defense Stability, Efficacy Index)

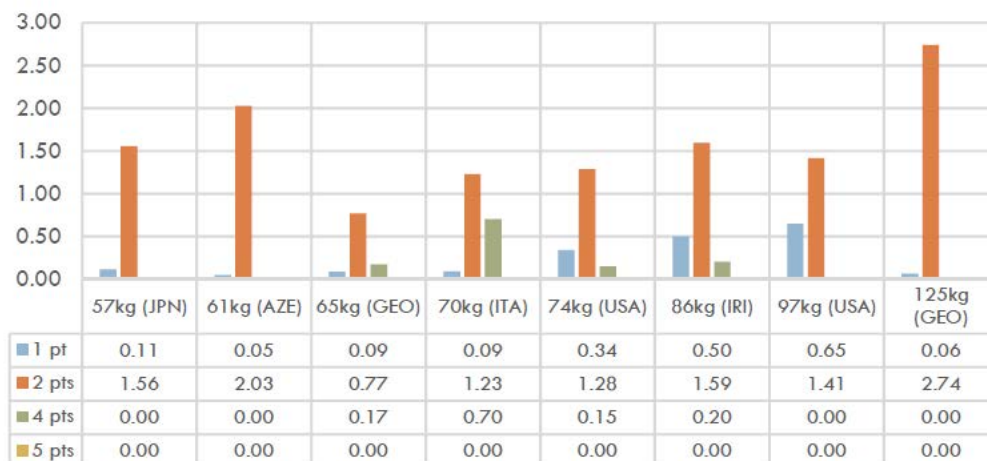
Figure 18 - Wrestling Efficacy (Wrestling Quality, Defense Stability, Efficacy Index)



Highlights

- Champions of 61kg, 70kg and 86kg showed impressive attack (over 2.0 pts/m) and defense (0.31 neg. pts/min or less) capabilities.
- Petriashvili (GEO, 125kg champion) defensive skills were not so impressive but he compensated it thanks to the top attack performance among champions as scored near to 3 pts/min.
- 57kg, 74kg and 97kg Champions kept good between attack and defense.
- 65kg Champion reached the lowest efficacy index due to the less pts/min scored among champions while his defense was similar to Japan, USA and 125kg' Georgia gold medalists.

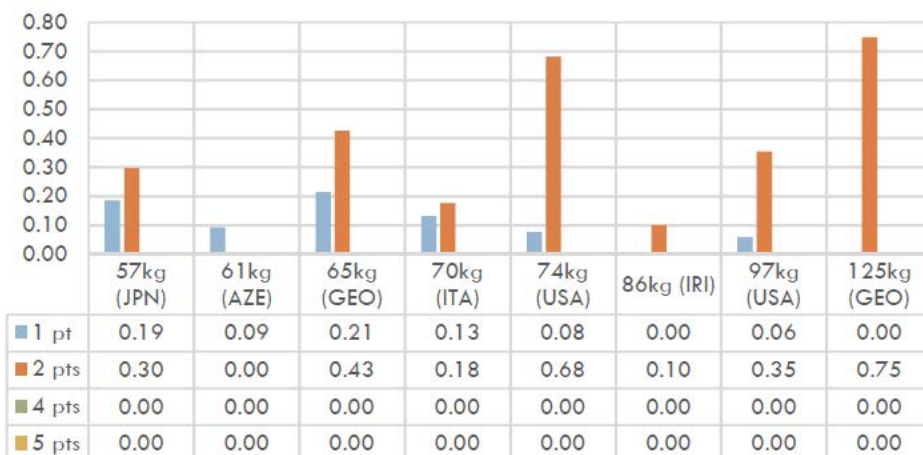
Figure 19 - Distribution of points scored by value
Men's freestyle Champions



Highlights

- Along with 1pt. and 2pts. actions, Champions from 65kg to 86kg scored at least one 4 pts. actions.
- Nobody among the champions made a single 5pts move.

Figure 20 - Distribution of points lost by value
Men's freestyle Champions

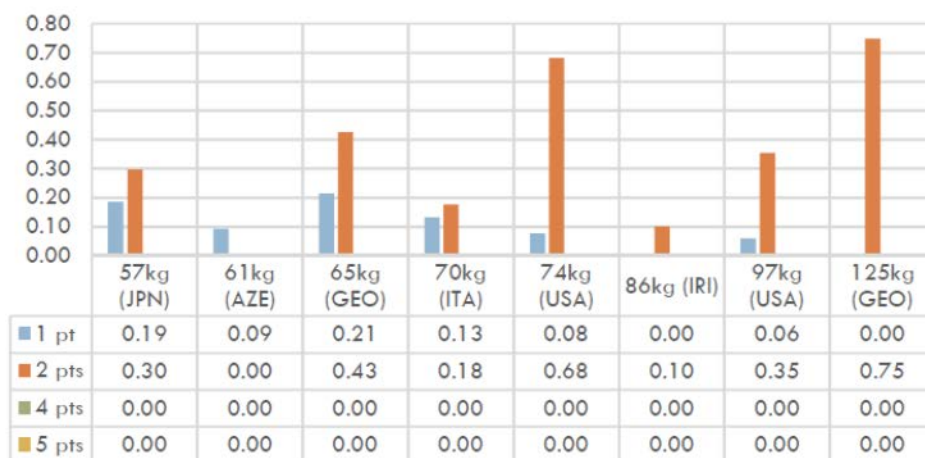


Highlights

□ The wrestlers who shown the best defensive skills (see figure 19) were also those who lost less points by 2 points actions.

Scoring pace of Men's Freestyle Champions.

Figure 20 - Distribution of points lost by value
Men's freestyle Champions



Highlights

Three different scoring pace patters can be seen among Champions:

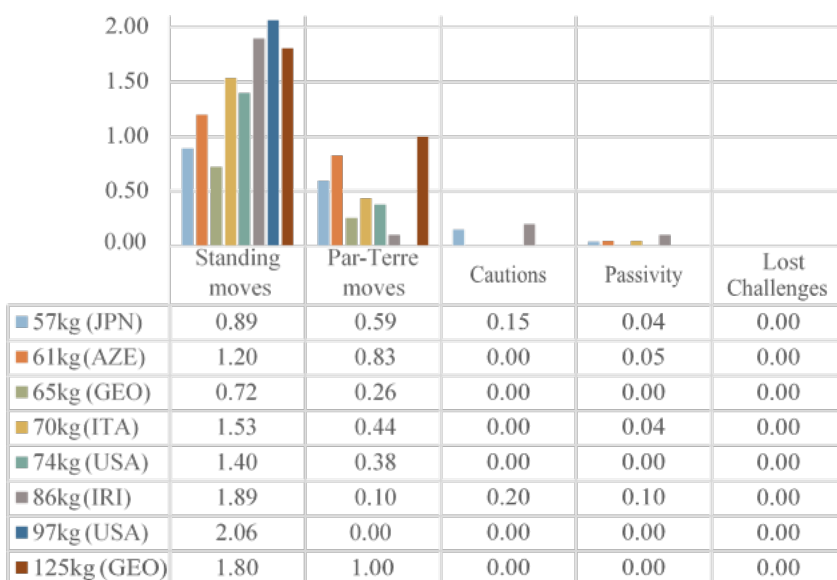
- an increasing-decreasing pace by period (57kg), by scoring more points during minutes 2 and 5,
- a strong, very active first period, then a relatively conservative pace during second period (61kg, 86kg and 97kg, less marked in 70kg),
- a progressively increasing scoring pace (65kg and 74kg).

Regardless of the pattern, all the champions could score during at least 5 of the 6 min. of their matches.

Highlights

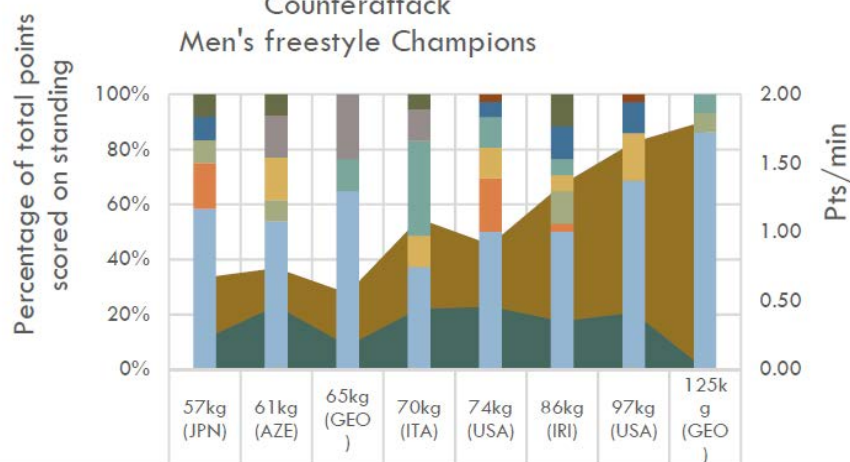
- Excepting for 125kg Champion, an observable trend was, the heavier the wrestler, the more standing scoring and lesser par- terre scoring.
- In that sense, considering the weight class, Petriashvili showed the highest balanced performance in both wrestling positions.
- As pointed before, Passivity points were a minimum contribution to

Figure 22 - Methods to score, Men's freestyle champions



Points scored by strategy and move, Men's freestyle Champions

Figure 23 - Scoring Strategies, Standing Moves by Attack & Counterattack Men's freestyle Champions



TOTAL STANDING ATTACKS	0.67	0.74	0.55	1.10	0.91	1.34	1.65	1.80
TOTAL STANDING COUNTERATTACKS	0.22	0.46	0.17	0.44	0.45	0.35	0.41	0.00
Standing Blocks, Counterattack	2	2	0	2	0	4	0	0
Step outs, Counterattack	0	0	0	0	1	0	1	0
Step outs, Attack	2	0	0	0	2	4	4	0
Throws & Shifts, Counterattack	0	4	4	4	0	0	0	0
Throws & Shifts, Attack	0	0	2	12	4	2	0	2
Takedowns, counterattacks	0	4	0	4	4	2	6	0
Takedowns, attack	2	2	0	0	0	4	0	2
Leg attacks, counterattacks	4	0	0	0	7	1	0	0
Leg attacks, attack	14	14	11	13	18	17	24	25

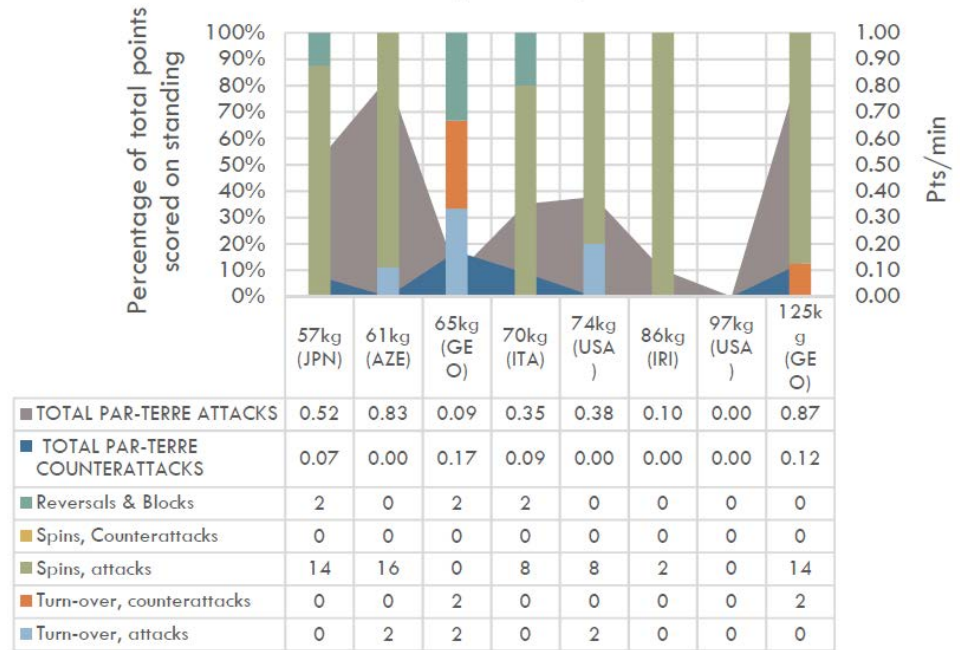
Highlights

- All Champions scoring points on standing with moves from at least three technical groups, usually Leg attacks, Takedowns and another one.
- Best technical diversity was shown by 57kg, 74kg. and 86kg.
- Only 125kg Champion did not score points from standing by counterattack moves.

Highlights

□ While 6 of 8 champions scored on par-terre using attack spin moves (ankle laces, gut wrenches, etc.), 65kg and 97kg champions did not use such moves at all. The last one even did not score a single point on that position.

Figure 24 - Scoring Strategies, Par-terre Moves by Attack & Counterattack
Men's freestyle Champions



SUMMARY

- Men's freestyle matches were distinguished by active wrestling minute by minute.
- About 70% of the points were scored by standing moves, predominating leg attacks.
- Points by Passivity and Cautions represented a very little percentage of the total scoring.
- Top 10 teams final ranking seems is related with the scoring pace minute by minute.
- The champions profile may differ individually however a constant scoring pace and balance between standing and par-terre activity characterize Gold Medalists.