

## **An analytic study of the effectiveness of offensive performance in greco-roman wrestling during the 2011 and 2013 world championships**

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### **Introduction:**

The Senior World Championship is the most important Championship in wrestling after the Olympic Games. Therefore the analysis of Senior World Championship has a great interest from all wrestlers and coaches. The statistical analysis for final Matches has a great importance for the current case. We can predict what will happen in the future in the universal wrestling basing on the analysis of conflict period during Matches. And also this analysis helps coaches preparing programmes for future competitions periods which contain what current wrestling reached at.

What previously mentioned forced the International Wrestling Federation to find a way of suspense, excitement and fun through making some modifications in the rules in

September 2013, and the most important modifications are:

- The wrestler who records two movements (scoring 3 points) becomes Technical Superiority winner if his total points more than his competitor.
- The wrestler who records one movement (scoring 5 points) becomes Technical Superiority winner if his total points more than his competitor.
- Taking down of competitor under control by three parties scoring (2 points).
- In Parterre the wrestler who turns over his competitor scoring (2 points).
- In Parterre position, if the position becomes head to head and if any of wrestlers turn over the other, he will score (2 points)

These modifications should achieve what are desired. They were sent to the International Olympic Committee and exactly were

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approved and wrestling was chosen to be between games existed in the records of the next Olympic Games.

Therefore the researcher wanted to shed the light analytically on the World Championship which was held in Hungary in 2013. As this contributes in supplying coaches with adequate information for preparing training programmes according to the quality of the skills used which had a great influence in achieving winning.

#### **Research Objectives:**

The research aims at identifying the effects of recent modifications in rules on the changes of Matches' results and this comes through:

- Identifying the most skills which have a decisive word in Matches.

- Identifying the preference ways to win in Matches.
- Identifying the most appropriate skills to each weight category.
- Identifying the number of points which are achieved in each weight.
- Identifying the number of points which are achieved in each weight category.

#### **Research Method and Sample:**

The researcher used the descriptive method, the sample consists of Greco-Roman wrestling Matches of 2011 and 2013 World Championships for adults.

#### **Research Tools:**

- A Computer- a (CD) contains Matches- Match analysis Form.

#### **The Basic Study:**

**Table (1)**

Total	Number of Matches per Weight						Championship	
	120kg	96kg	84kg	74kg	66kg	60kg		55kg
348	46	49	53	53	58	47	42	2011
286	32	43	40	44	44	45	38	2013

Table (1) indicates a comparison between the number of Matches in each weight and the total

Matches in each Championship.

#### **Results:**

#### **Table (2), Figure (1) Technical Points for the Two Championships**

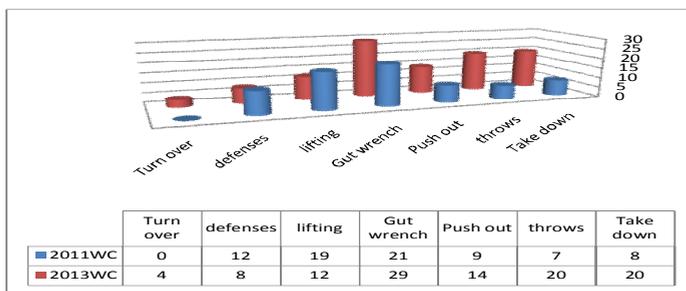


Table (2), Figure (1) indicates the most implemented skills during 2011 and 2013 Championships. It is clear from the table and its figure that "Gut Wrench" is the most implemented skill during 2011 Championship, and it is the same skill which

ranked first of skills arrangement during 2013 Championship. "Lifting" skill occupied the second place during 2011 Championship with (19) points, while the same skill ranked fifth with (12) points during 2013 Championship.

**Table (3), Figure (2)**  
**Average of Points for the Two Championships According to Weight**

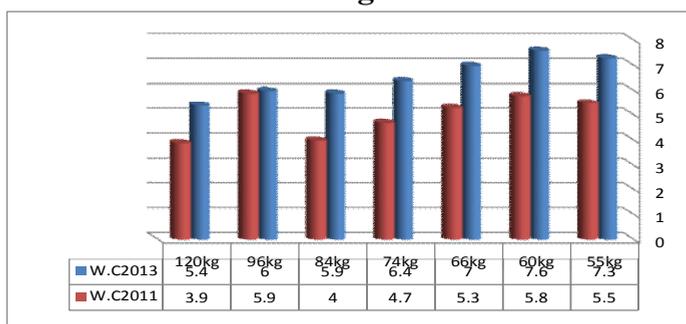


Table (3), Figure (2) indicates the average of points achieved during 2011 and 2013 Championships. It is clear that the highest average during 2011

Championship is (5.9) for the weight (96 kg), while the highest average during 2013 one is (7.6) for the weight (60 kg). It is also clear that the least average during

2011 Championship is (3.9) for the weight (120 kg), while the least average

during 2013 one is (5.4) for the weight (120 kg).

**Table (4), Figure (3) Average of Points According to Weight Category**

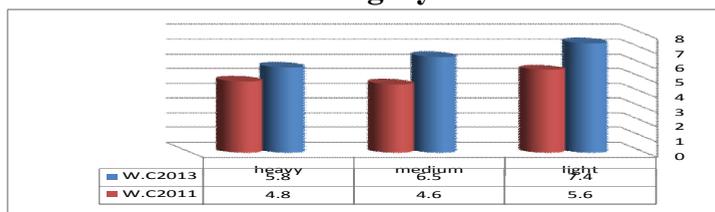


Table (4), Figure (3) indicates the average of technical points for each weight category of the three categories during 2011 and 2013 Championships. It is clear that there is higher

average in the technical points for the Light weight category during 2013 Championship which reached (7.4) than Medium weight category which reached (6.5).

**Table (5), Figure (4) The Percentage of Winning by Technical points**

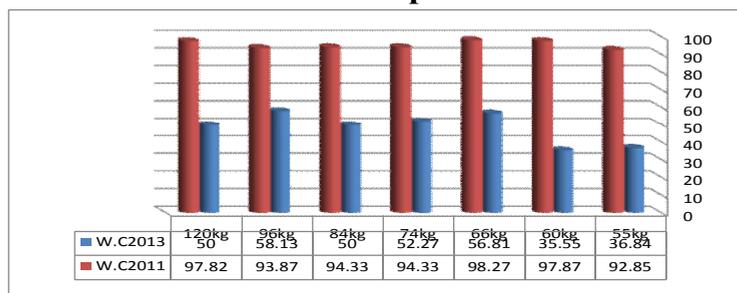


Table (5), Figure (4) indicates a way from various ways of winning; it is winning by Technical points. It is clear that there is higher winning average by Technical points for the weight (96kg) with (58.13%)

than other weights during 2013. In the other side, there is higher winning percentage for the weight (66kg) with (98.27%) than other weights during 2011. It is also clear the higher average of all weights of 2011

Championships than 2013 one.

**Table (6), Figure (5) The Percentage of Winning by Technical Superiority**

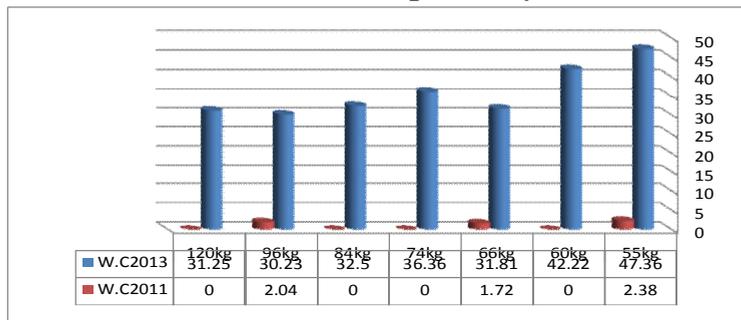


Table (6), Figure (5) indicates a way from various ways of winning; it is winning by Technical Superiority. It is clear that there is higher winning

average by Technical Superiority for the weight (55kg) with (47.36%) than other weights during 2013 Championship.

**Table (7), Figure (6) The Percentage of Winning by Victory by fall**

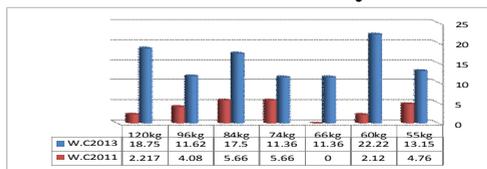


Table (7), Figure (6) indicates a way from various ways of winning, it is winning by "Victory by fall". It is clear that there is higher winning average by Victory by fall for the weight (60kg) with (22.22%) than other weights during

2013 Championship. In the other side, there is higher winning average for the weights (74,84kg) with (66%) than other weights during 2011 Championship. It is also clear the higher average of all weights during

2013 Championship than 2011 one.

**Table (8), Figure (7)**  
**The Value of Technical Skills of the Weighted Categories**

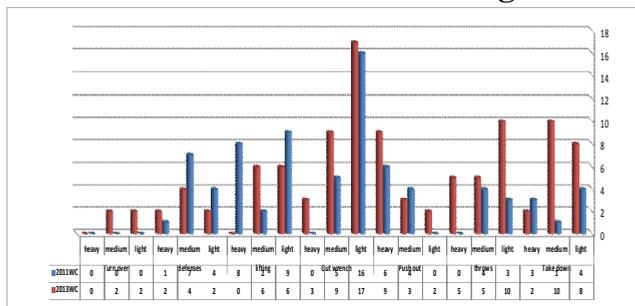


Table (8), Figure (7) indicates the value of technical skills which were carried out during the final matches of 2011 and 2013 Championships for each weight category. During 2011 the highest value was for lightweight (16) points

represented by Gut wrench skill, the highest value for mediumweight category is (7) points represented by Defence skill, and the highest value for heavyweight category is (8) points represented by Lifting skill.

**Table (9), Figure (8)**  
**The Percentage of the Type of Winning for the Weight (55kg)**

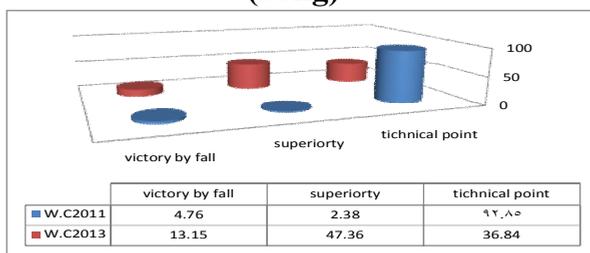


Table (9), Figure (8) indicates the three ways of winning for the weight (55kg). There is higher winning average by Technical Points with

(92.85%) than other ways during 2011 Championship. In the other side, there is higher winning average by Technical Superiority with (47.36%) than other ways

during 2013 Championship. It is also clear that there is high winning average by Technical Points with (92.85%) during 2011 Championship versus (36.84%) during 2013 Championship. And there is high winning average by

Technical Superiority with (47.36%) during 2013 Championship versus (2.38%) during 2011 one. Also there is high winning average by Victory by fall with (13.15%) during 2013 Championship versus (4.76%) during 2011 one.

**Table (10), Figure (9)  
The Percentage of the Type of Winning for the Weight (60kg)**

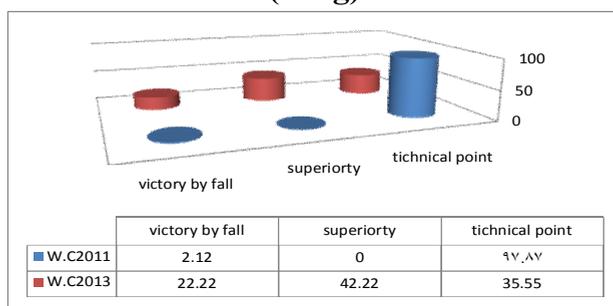


Table (10), Figure (9) indicates the three ways of winning for the weight (60kg). There is higher winning average by Technical Points with (97,87%) than other ways during 2011 Championship. In the other side, there is higher winning average by Technical Superiority with (42.22%) than other ways during 2013 Championship. It is also clear that there is high winning average by

Technical Points with (97.87%) during 2011 Championship versus (35.55%) during 2013 Championship. And there is high winning average by Technical Superiority with (42.22%) during 2013 Championship versus (zero) during 2011 one. Also there is high winning average by Victory by fall with (22.22%) during 2013 Championship versus (2.12%) during 2011 one.

**Table (11), Figure (10)**

### The Percentage of the Type of Winning for the Weight (66kg)

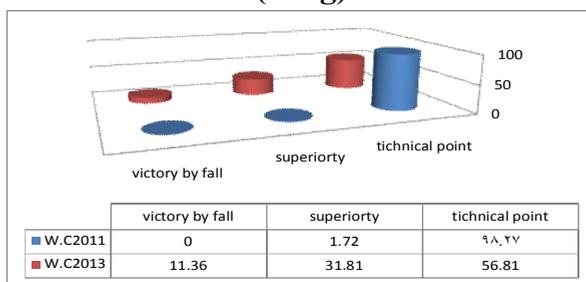


Table (11), Figure (10) indicates the three ways of winning for the weight (66kg). There is higher winning average by Technical Points with (98,27%) than other ways during 2011 Championship. In the other side, there is higher winning average by Technical points with (65.81%) than other ways during 2013 Championship. It is also clear that there is high winning average by

Technical Points with (98.27%) during 2011 Championship versus (56.81%) during 2013 Championship. And there is high winning average by Technical Superiority with (31.81%) during 2013 Championship versus (1.72%) during 2011 one. Also there is high winning average by Victory by fall with (11.36%) during 2013 Championship versus (zero) during 2011 one.

**Table (12), Figure (11)**

### The Percentage of the Type of Winning for the Weight (74kg)

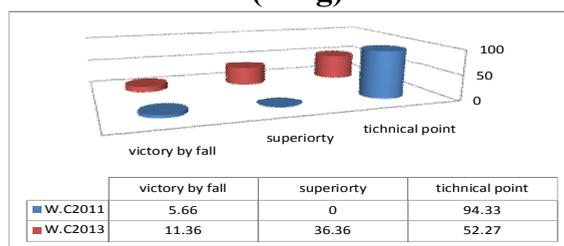


Table (12), Figure (11) indicates the three ways of winning for the weight (74kg).

**Table (13), Figure (12)  
The Percentage of the Type of Winning for the Weight (84kg)**

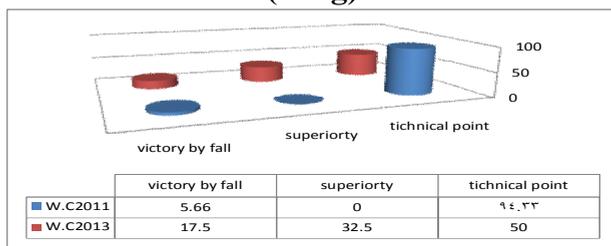


Table (13), Figure (12) indicates the three ways of winning for the weight (84kg).

**Table (14), Figure (13)  
The Percentage of the Type of Winning for the Weight (96kg)**

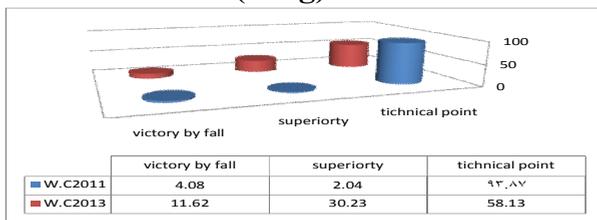


Table (14), Figure (13) indicates the three ways of winning for the weight (96kg).

**Figure (14)· Table (15)  
The Percentage of the Type of Winning for the Weight (120kg)**

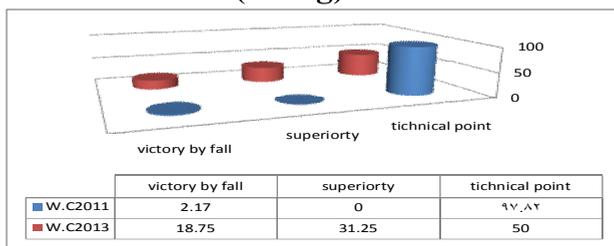


Table (15), Figure (14) indicates the three ways of winning for the weight (120kg).

#### **Discussion of Results:**

In the light of reached results at the current research, the researcher will interpret these results according to research objectives and its hypotheses.

#### **\* Discussion of the first question: What are the most skills that had a decisive word in Matches during 2011 and 2012 World Championships?**

By analysing the final Matches for the seven weights during 2011 and 2013 Championships, it becomes clear from table (2), figure (1) that the technical skills which were achieved during the two Championships. The number of points which were achieved by implementation of these skills is obvious as the more skills during 2011 Championship are ordinally (Gut wrench- Lifting- Defence- Push out- Take down- Throws- Turn over), and this order differed during 2013 Championship to be ordinally (Gut wrench- Take down- Throws- Push out- Lifting- Defence- Turn over).

The results of 2011 Championship are matched with what **Milorad Dokmanace & Petar Karadzic (2012)** rethead at. The two authers refer to that there are no distinctions in Greco-Roman wrestling than previous years, at least when the matter is related to Standing and Par terre positions. The percentage for Par terre is (70%), and it is more than Standing position. Through analysing some technical skills, it is obvious that the Gut wrench skill is the most dominated skill as a way for achieving high points. And generally, Par terre position is more superior than Standing position by using five skills versus only two skills of Standing position.

The researcher founded that the change in the order of skills during 2013 returns mainly to the modifications of the rules which gave the Take down skill (2) points rather than (one) point, also gave Throws (which takes (5.3) referring to it by 'Grand Techniques') more importance through the performance of two skills with (3) points or a skill with (5) points during the match, and this end the match

by obvious Technical superiority if the final result was a difference in one point for the winner.

**\* Discussion of the second question: What are the best ways for winning during 2011 and 2013 Championship?**

Through analysing the three ways of winning, and it is (Technical points- Technical superiority- Victory by fall) during 2011 and 2013 Championship, it is obvious from tables (5,11), figures(4,10) the higher winning percentage by technical points for the weight (66kg) with (98.27%) than other weights during 2011 Championship. In the other side, there is higher winning percentage by technical points for the weight (96kg) with (58.13%) than other weights during 2013 Championship as it is indicated in tables (5,14), figures (4,13). It is also obvious the higher percentage of all weights for 2011 Championship than that of 2013.

It is obvious from tables (6,9), figures (5,8) the winning by Technical superiority as there is higher winning average by technical superiority for the

weight (55kg) with (47.36%) than other weights during 2013. In the other side, there is higher percentage in the weight (55kg) with (2.38) than other weights during 2011 Championship. This demonstrates the excellence of the weight (55kg) at achieving this type of winning. It is also obvious the higher percentage of all weights during 2013 Championship than 2011 one.

Tables (7,10,12,13), figures (6,9,11,12) shows winning by victory by fall, as there is higher winning percentage by victory by fall for the weight (60kg) with (22.22%) than other weights during 2013. In the other side, there is higher percentage in the weights (74,84kg) with (5.66%) than other weights during 2011. There is also higher percentage for all weights of 2013 than that of 2011.

Through what previously mentioned, it is obvious that winning by technical points is the best way for winning in 2011, while winning by technical superiority and victory by fall are the best ways for winning in 2013.

The researcher sees that what happened from modifications in rules were for increasing excitement by achieving high points. So we can conclude that winning by Technical points don't mean achieving many points. We can also conclude that the modifications had a great effect on matches' results through increasing the percentage of technical superiority during 2013 which reached (47.36%) and it is more than that of 2011 which reached (2.38%).

**\*Discussion of the third question: Are there distinctions between the most skills that fit every weight category during 2011 and 2013 Championship?**

Table (8), figure (7) includes the answer for this question. It indicates the values of Technical skills which were carried out during the last matches of 2011 and 2013 in each weight category. It is obvious that the highest value for the lightweight category is (16) points represented by Gut wrench skill, while the highest value for the mediumweight category is (7) points represented by defence skill, while also the highest value for the heavy weight category is

(8) points represented by lifting skill during 2011.

But during 2013 the highest value for lightweight category is (17) points represented by Gut wrench skill, while the highest value for mediumweight category is (10) points represented by Take down skill, while also the highest value for heavyweight category is (9) points represented by Push out skill.

It is now clear that the Gut wrench skill represents a great importance for lightweight category during 2011 and 2013 Championships. Also it had the highest value during the two Championships rather other skills.

It is also clear that there are distinctions between skills which fit each weight categories during the two championships. The importance of the Take down and Pushout skills is obvious in 2013 and weight categories (medium and heavy) in order are characterized by them. The researcher attributed that to rules' modifications which had a great rule in changing skills to fit each weight category.

From what previously displayed, we can give an answer to the third question

with "yes", there are distinctions between the most skills which fit each weight category during 2011 and 2013 Championships.

**\* Discussion of the fourth question: Are there distinctions between the number of points which were achieved in each weight during 2011 and 2013 Championships?**

Table (3), figure (2) indicates the average of points which achieved during 2011 and 2013 Championships. It is obvious that the highest average during 2011 is (5.9) for the weight (96kg), while the highest average for 2013 is (7.6) for the weight (60kg). Also it is obvious that the least average for 2011 is (3.9) for the weight (120kg), while the least average for 2013 is (5.4) for the same weight.

The table also indicates generally the higher technical points averages for 2013 than that of 2011, and that is what **Harold Tunnemann (2013)** asserted, as he asserted that there is high increase in technical points during Junior World Championship. For example, the Turkish player weighting (55kg) scored (24) points during only (4) minutes,

and this is the total of four matches. The researcher attributes this great change in technical points to the rules' modifications. As the new rules give a great importance to the take down skill with (2) points rather than (one) point, and give throws skills (which take (5.3), called 'Great technical movements') importance through performing two skills with (3) points or a skill with (5) points during the match which is ended by technical superiority even if the final result were one point difference for the winner.

Also the strictness of new rules in adjudicating the negative player by warning, then taking the second warning in account accompanied by a point, then the third warning accompanied by another point, after that the player is dismissed with the third warning, makes the player more anxious to implementation during the match which contributes in increasing the number of technical points during 2013 Championship more than that of 2011.

**\* Discussion of the fifth question: Are there distinctions between the**

### **number of points which were achieved in each weight category during 2011 and 2013 Championships?**

Table (4), figure (3) indicates the average of technical points for each weight category from the three categories during 2011 and 2013. It is obvious the higher average of technical points for the lightweight category during 2013 which reached (7.4) than mediumweight category which reached (6.5) and also than heavyweight category which reached (5.8) at the same championship. It is also obvious the higher average of technical points for the lightweight category during 2011 which reached (5.6) than the mediumweight category which reached (4.6), and than heavyweight category which reached (4.8) at the same championship. It is also obvious the higher average of technical points for the three weight categories during 2013 Championship than 2011 one.

The researcher attributed that raise in technical points to rules' modifications which gave importance to some skills which had an effective role in increasing technical points.

It becomes clear that the lightweight category during the two Championships is characterized by the raise of technical points. Which proofs that this weight has the ability to perform high technical skills more than others of other weight categories. Thus the order of weight categories - achieved during 2013- according to the number of technical points is as follows (lightweight category- heavyweight category- mediumweight category)

#### **Conclusions:**

- 1- More skills during 2011 Championship are ordinarily (Gut wrench- Lifting- Defence- Push out- Take down- Throws- Turn over), and this arrangement differed during 2013 Championship to be ordinarily (Gut wrench- Take down- Throws- Push out- Lifting- Defence- Turn over).
- 2- Raising of technical points averages for 2013 Championship than that of 2011 one.
- 3- Arrangement of weighted categories according to the number of achieved technical points during 2013 is as follows (lightweight category- mediumweight category- heavyweight category). But in

2011 is as follows (lightweight category- heavyweight category- mediumweight category).

4- There are high rates of winning by technical superiority and victory by fall during 2013 Championship than that of 2011, which shows the reason for increase in technical points during 2013 Championship.

5- There are distinctions between the more skills that fit each weight category during 2011 and 2013 Championships.

#### **Recommendations:**

1-There should be studies dealing with other aspects of the 2013 World Championship.

2-The need to focus on the skills which the current study reached at in preparing training programmes.

3-The need for preparing a study that includes the design of an electronic program for analysing Matches.

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