



## Scientific Report

# The health-improving role of sport based on the example of Georgian wrestlers' achievements at international sporting events

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### Abstract

In the modern world, observing sports, particularly wrestling, from both a physical and a scientific-medical perspective, is of paramount importance. The trends and dynamics of this sport develop over time and change over the years and, as it turns out, it is positively correlated with improvements in mass health levels. This article is based on the analysis method developed by the United World Wrestling Organization (Performance Data Analysis – PDA), which allows us to study the current global trends in wrestling, technical and tactical characteristics by weight category, evaluate the performance of Georgian athletes in important international competitions, and draw appropriate conclusions. The paper analyzes statistical data, important facts, and the performance of Georgian wrestlers in major competitions held in 2021, including the Olympic Games, World and European Championships.

**Keywords:** Performance Data Analysis (PDA), Championships, standing position, „suflex“, take downs are often executed, GUT WRENCH, The choke with pull-ups (LIFTS), Athlete, wrestler, The post-COVID period, "WIN-LOST".

### Introduction

The current method of analysis developed by the International Wrestling Federation, based on the Internet platform (Performance Data Analysis - PDA), allows for the creation of a vast number of scientific and research works in wrestling. It is possible to obtain data as a result of qualitative analysis of wrestling elements executed at major

championships over the last four years, therefore, it is clear in which direction world wrestling is heading when it comes to the technical and tactical parameters of this sport. Georgian wrestlers have won 67 medals at the Olympic Games, World and European Championships in a four-year cycle. Our team is considered one of the strongest teams in the world. Along with the above statistics, the



work also includes an analysis of the performance of Georgian athletes.

PDA analysis contains electronic tables and graphs that review: (Basic information about matches; Review of all matches – standing/parterre points and technical/other points; Overview by weight category – standing/parter points & WQ/min; Overview by weight category – technical/other points and WQ/min; Overview per national team – basic data (standing/parter – technical/other points and WQ/min); Performance of national teams – points WIN / national teams – points LOST / national teams; Review of medal matches (I-II, III-V); Review of % points for all matches (final, bronze medal match); Review of timekeeping points per minute (all matches); Most successful wrestler (MSW), best wrestlers by technique, techniques for all wrestlers "WIN" and "LOST").

The materials are presented on a publicly available PDA platform. PDA analysis allows national teams to conduct research, improve crucial components, and advance the level of wrestling in the country. What's more, it is possible to work on scientific papers based on the materials.

Part I of the paper will discuss the outstanding events of 2021, important trends, and the performance of Georgian athletes at the championships.

## **Main body**

### **Greco-Roman wrestling**

#### **2021 – European Championship**

The 2021 European Championship was hosted by Poland. It is worth noting that

1483 points were scored in 198 matches, which is an average of 7.49 points per match. Most of the points scored are accumulated in the 2nd minute, which is logical, since this is when the “passivity” point is recorded, and the athletes are given the opportunity to perform movements from the ground.

56.98% of the overall points are scored in the standing position, and the remaining 43.02% in the “parterre”. Nevertheless, if we analyze individual movements, the most popular is the GUT WRENCH, which makes up 27.11% of the elements performed.

Statistics show that the style and dynamics of the tricks performed vary dramatically depending on the weight. For example, in relatively light weights (up to 77), wrestlers try to grab their opponent from the chokehold and perform high-amplitude throws, while in heavy weights (from 77), they more actively use flips on the ground. In the standing position, the highest number of points is recorded using “passivity”, as for tricks, the so-called „suflex“ and take downs are often executed.

One noteworthy detail was observed at the 2021 European Championships. In 9 out of 10 weight categories, more points are scored standing than on the parterre. The exception is the 77 kg weight category, where 51.37% of tricks are performed on the “parterre” - the difference here is minimal. The biggest difference between the two directions is recorded in 97 kg (52.48%), where 76.24% of tricks are performed standing, and only 23.76% from the floor.

The Georgian team competed in all ten weight categories at the continental championship.



Our total at the competition was 1 gold, 1 silver, and 2 bronze. Shmagi Bolkvadze became the champion in the 72 kg weight category, Iakob Kajaia won silver in the 130 kg, and Leri Abuladze (63 kg) and Ivango Rikadze (82 kg) won bronze medals. As for the technical-tactical analysis, it is worth noting that, unlike the general trend, the national team scores more points in the snatch (76) during the attack than in the standing position (47), while most of the points lost (69 points) come in the standing position, only 21 on the ground. This means that the Georgian team has a high performance in the snatch and is one of the best, although it scores relatively fewer points from the standing position and concedes more. If we express it as a percentage, 62% of the points scored by the team in the mentioned tournament were made from the ground and only 38% from the standing position, while, as we saw above, these figures are almost equal in modern wrestling. If we turn to the defense component, up to 77% of the points lost come from the standing position.

The team's main "weapon" is the choke turn. Out of 123 points accumulated by the Georgian national team at the mentioned championship, 26 points were gained by activity, second to the technique points, making up 56. According to separate data, our athletes were distinguished in several components, among which Nugzar Tsurtsumia was in 3rd place by points gained from "suflex" - movement, with which the wrestler from Khobi gained 4 points. In the prior-mentioned GUT WRENCH, Leri Abuladze took second place, gaining 16

points, and Iakob Kajaia, 14, took third place in the calculation.

In this analysis, the champions' column is separated, which allows us to deeply analyze Shmagi Bolkvadze's wrestling. The athlete from Adjara played a total of 4 full matches (24 minutes), scored 12 points, and only gave up 2. Half of the points he earned were due to his activity; he knocked down his opponents on the ground twice (4 points), "blocked" his opponent on a counterattack once, and earned a point due to an incorrectly protested challenge by his opponent once. Of the 2 points he lost, 1 was due to passivity, the other - for leaving the zone. Bolkvadze lost only in the finals of the mentioned championship, by just a few seconds; the rest of the time he either won or the score was 0-0 on the scoreboard. The Georgian athlete won all matches against his opponents by at least 2 points and gained the continental championship title with pragmatic, powerful wrestling, primarily in the standing position.

### 2021 – Olympic Games

The Olympic Games were held in Tokyo in the summer of 2021. As you know, due to the pandemic, the event was held a year later than in 2020. In 115 matches, athletes scored 798 points, which is more than 10 hours spent on the mat and an average of 6.94 points accumulated per match.

Unlike the European Championship, the increased percentage of points scored in the standing position is noticeable - 59.15%. Although only 40.85% of the tricks in the choke are completed, if we consider individual movements, there are the "parterre" movement and the GUT WRENCH that are



The most popular. 23.06% of the points are accumulated by flips from parterre.

According to the accumulation of points, the most productive weight category turned out to be the 67 kg weight category. Athletes in this weight category scored 161 points. The trend is also maintained that athletes are more actively collecting points in the standing than in the parterre. However, in the heavyweight category, it is the opposite. (55.05% in snatch, 44.95% in standing).

At the Olympic Games, the Georgian national team won 4 out of 6 possible licenses and finished the competition with a silver medal. Iakob Kajaia took second place in the 130 kg weight category, Ramaz Zoidze (67 kg) lost the bronze match, and Lasha Gobadze (87 kg) and Giorgi Melia (97 kg) withdrew from the competition at an early stage.

As for the technical-tactical analysis, in Tokyo, Georgian athletes gained 38 points and lost 34, unlike the European Championship, there is practically no difference between the points lost and gained in both the standing and snatch. It is also worth noting that Ramaz Zoidze scored 18 of the 38 points gained.

Georgian athletes scored the most points in standing (52.63%), and in the parterre - 47.37%. This time, the wrestlers also scored the most points in parterre with a turn (GUT WRENCH) - 10, and in second place were the points received from warning opponents (9).

According to separate data, 2 Georgian athletes can be distinguished. Ramaz Zoidze scored a total of 8 points in two standing

movements - HIP TURNING THROW and FORWARD BENDING THROW, and took the leading places in both indicators. Lasha Gobadze scored 2 points in each, the side and ground counterattacks, and was also among the leaders in this movement.

### 2021 – World Championship

The 2021 World Championship was held in Oslo, Norway. The total number of matches was 278, and 2099 points were accumulated. The athletes spent almost 23 hours on the wrestling mat, scoring an average of 7.55 points per match.

The wrestlers scored 54.07% of their points in standing and 45.93% in parterre, which is similar to the statistics recorded at the European Championship. It is worth noting that the highest number of points at the World Championship was recorded in “passivity” (18.06%), which indicates pragmatic wrestling. 2nd and 3rd places come from points gained from the choke - 17.44% from the choke with a twist (GUT WRENCH) and 17.68% from the choke with pull-ups (LIFTS).

According to statistics, the most points (314) were collected in the 77kg weight category. In this weight category, 50.96% of the points are scored on the snatch, a similar situation is in 82 kg, where 51.09% of the tricks are performed on the so-called parterre. Only in these two weight categories are most of the tricks performed on the “parterre”. In the remaining 8 weight categories, the points scored in the standing position are higher. The biggest difference in this regard is observed in the heavyweight category, where the difference was



approximately 29%, and 64.66% of the points were scored in the standing position, while in the snatch, 35.34%.

The Georgian team traditionally participated in the World Championship with 10 athletes and won 5 medals. Leri Abuladze won silver in the 63kg category, while Nugzar Tsurtsumia (55kg), Ramaz Zoidze (67kg), Lasha Gobadze (87kg), and Iakob Kajaia (130kg) won bronze medals.

As for the technical-tactical analysis, unlike the European Championship, the national team scored more points in the standing position (81) than in the clean and jerk (55). Most of the points lost (58 points) came from the standing position, only 22 from the ground.

Unlike the European Championship, the team's performance follows the general trends, and this time Georgian athletes also scored more points in the standing position (59.56%) than in the floor position (40.44%). The most points were obtained by the GUT WRENCH in the parterre (28), and in second place were the points obtained by warning the opponents (24). It is worth noting that in the parterre, the team is one of the best in the defensive component, and only 27.50% of the tricks performed were on the "floor position". According to separate data, 3 Georgian athletes can be distinguished. Leri Abuladze took one of the leading places with points obtained from the GUT WRENCH in the parterre. he performed 6 spins and, accordingly, obtained 2 times more points. A popular element among the leaders, the so-called TAKEDOWN was performed by

Nugzar Tsurtsumia, obtaining 6 points from it. Ramaz Zoidze stood out in two components. The Adjarian athlete scored 16 points with the "HIP TURNING THROW" and was first in this indicator, and in the second movement (FORWARD BENDING THROW), he scored 4 points and was third. In total, Zoidze scored 33 points in 4 matches and was the best from our team in this indicator.

## Conclusion

In 2021, in the post-COVID period, all three large-scale events were held - the Olympic Games, the European and World Championships. A total of 591 matches were held at these three tournaments, where wrestlers scored an average of 7.32 points. It is worth noting that several trends were identified. First of all, more points are scored in standing than in parterre, although the difference between them is not so great. This indicator was similar at all three events. The wrestlers' "main weapon" is the GUT WRENCH - with this movement, athletes scored the most points at the European Championships and the Olympics, and it was the 2nd most popular movement at the World Championships. It is worth noting that strong teams are equally successful in both standing and parterre, and there is a noticeable balance in both points gained and lost.

The Georgian national team ended 2021 with 10 medals (1 gold, 2 silver, 7 bronze). The most consistent wrestler is Iakob Kajaia. The Tskaltubo heavyweight won silver medals at the Olympic Games and Continental Championships, and bronze at the World Championships. Noteworthy Leri Abuladze, who competed in a non-Olympic weight



category and managed to win medals at both major tournaments, and was also one of the leaders of the GUT WRENCH movement, mentioned more than once above. The gold medal won at the European Championships was the only one for the team in 2021. As noted, Shmagi Bolkvadze managed to win with pragmatic, powerful,

and offensive wrestling. The most offensive member of the team this year was Ramaz Zoidze - the athlete from Adjara won bronze at the World Championships, but his wrestling style was also outstanding, thanks to which Ramaz was one of the best not only among Georgians, but also in the world, both in terms of scoring points and his diverse tricks.

### სპორტის გამაჯანსაღებელი როლი ქართველ მოჭიდავეთა საერთაშორისო სპორტულ ღონისძიებებზე მიღწევების მაგალითზე ედიშერ მაჩაიძე<sup>1</sup>, ზურაბ ბერიკაშვილი<sup>2</sup>

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#### აბსტრაქტი

თანამედროვე სამყაროში სპორტზე, კერძოდ, ჭიდაობის სახეობაზე დაკვირვება, არა მხოლოდ ხალიჩაზე, არამედ სამეცნიერო-სამედიცინო პერსპექტივიდანაც, უმნიშვნელოვანესია. ამ სპორტის სახეობის ტენდენციები და დინამიკა დროთა განმავლობაში ვითარდება და წლებთან ერთად იცვლება და, როგორც ირკვევა, პოზიტიურ კავშირშია მასობრივი ჯანმრთელობის დონის გაუმჯობესებასთან. ამდენად, ეს სტატია ეფუძნება გაერთიანებული მსოფლიო ჭიდაობის ორგანიზაციის მიერ შემუშავებულ ანალიზს (Performance Data Analysis – PDA), რომელიც საშუალებას გვაძლევს შევისწავლოთ ჭიდაობის მიმდინარე გლობალური ტენდენციები, ტექნიკური და ტაქტიკური მახასიათებლები წონითი კატეგორიების მიხედვით და შევაფასოთ ქართველი სპორტსმენების გამოსვლა მნიშვნელოვან საერთაშორისო ასპარეზობებში და გავაკეთოთ შესაბამისი დასკვნები. ნაშრომში განხილულია სტატისტიკური მონაცემები, მნიშვნელოვანი ფაქტები და ქართველი მოჭიდავეების გამოსვლა 2021 წელს ჩატარებულ ძირითად შეჯიბრებებში, მათ შორის ოლიმპიურ თამაშებში, მსოფლიოსა და ევროპის ჩემპიონატებზე.

**საკვანძო სიტყვები:** შესრულების მონაცემთა ანალიზი, ჩემპიონატები, დგომში, „სუპლექსი“, მოგვერდი, „შიგა გასაღები“, ჩოქბჯენი, სპორტსმენი, მოჭიდავე, პოსტკოვიდური პერიოდი, "მოგება-წაგება".



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