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POLISH ACHIEVEMENTS IN COMBAT SPORTS AT THE MODERN OLYMPIC GAMES AND THEIR POSITION COMPARED TO OTHER COUNTRIES IN CENTRAL AND EASTERN EUROPE

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Polskie osiągnięcia w sportach walki na nowożytnych igrzyskach olimpijskich i ich pozycja na tle innych krajów Europy Środkowo-Wschodniej

Streszczenie

Celem artykułu jest popularyzacja wiedzy na temat osiągnięć Polaków w sportach walki: boksie, szermierce, judo, karate, pięcioboju nowoczesnym, taekwondo i zapasach na nowożytnych igrzyskach olimpijskich. Posłużono się oficjalnymi danymi Międzynarodowego Komitetu Olimpijskiego. Porównano znaczące osiągnięcia Polski w sportach walki z osiągnięciami pozostałych państw Europy Środkowo-Wschodniej. Do analiz przyjęto łączną liczbę punktów medalowych zdobytych przez reprezentantów poszczególnych krajów dla współczynnika przeliczeniowego (5 punktów – złoty medal, 3 punkty – srebrny medal, 1 punkt – brązowy medal). Ponadto uwzględniono zmiany geopolityczne w całym analizowanym okresie. Medale zdobyte przez sportowców z ZSRR, Jugosławii, Czechosłowacji lub Wspólnoty Niepodległych Państw zostały przypisane do poszczególnych krajów w odniesieniu do narodowości danego sportowca. Wyniki przedstawiono w formie map i tabel. Spośród analizowanych olimpijskich sportów walki Polacy odnosili największe sukcesy w boksie, szermierce i pięcioboju nowoczesnym, a spośród dalekowschodnich sportów walki tylko

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w judo. Analiza porównawcza z innymi krajami Europy Środkowo-Wschodniej wykazała, że kraje te mają największe osiągnięcia w zapasach, boksie i judo, a najmniejsze w karate i taekwondo.

Słowa kluczowe: geografia sportu, Europa Środkowa, Europa Wschodnia, Igrzyska Olimpijskie, sporty walki.

Abstract

The aim of this article is to provide information on the achievements of Poles in combat sports: boxing, fencing, judo, karate, modern pentathlon, taekwondo, and wrestling at the modern Olympic Games. Official data from the International Olympic Committee was used. Poland's significant achievements in combat sports were compared with those of other Central and Eastern European countries. The analysis was based on the total number of medal points won by representatives of individual countries for the conversion coefficient (5 points – gold medal, 3 points – silver medal, 1 point – bronze medal). In addition, geopolitical changes throughout the analysed period were taken into account. Medals won by athletes from the USSR, Yugoslavia, Czechoslovakia, or the Commonwealth of Independent States were assigned to individual countries according to the nationality of the athlete. The results are presented in the form of maps and tables. Among the Olympic combat sports analysed, Poles were most successful in boxing, fencing, and modern pentathlon, and among Far Eastern combat sports, only in judo. A comparative analysis with other Central and Eastern European countries showed that these countries have the greatest achievements in wrestling, boxing, and judo, and the least in karate and taekwondo.

Keywords: Central Europe, combat sports, Eastern Europe, geography of sport, Olympic Games.

Introduction

Combat sports in Central and Eastern Europe are an important part of culture and society. They reflect both European traditions and contemporary trends in Asian martial arts. Various disciplines are popular both as forms of physical activity and methods of self-defense. Their popularity in the region stems from the rich history of combat sports, as well as their role in education through sport.¹

Poland has made considerable contributions to combat sports, as evidenced by its numerous medals at the Olympic Games. In light of this, it is fitting to recall these achievements as we mark the centenary of Poland's participation in the modern Olympic Games (1924-2024).² This article represents a continuation of the authors' research into the geography of Olympic combat sports at the mod-

¹ W. J. Cynarski, L. Sieber, K. Obodyński, M. Ďuriček, P. Król, M. Rzepko, *Factors of Development of Far Eastern Martial Arts in Central Europe*, "Journal of Human Kinetics" 2009, vol. 22, pp. 69-75.

² H. Reid, *Olympic Philosophy: The Ideas and Ideals behind the Ancient and Modern Olympic Games*, Sioux City 2020.

ern Olympic Games, as previously outlined.³ Combat sports are sports that emulate combat techniques,⁴ and they were already present in the ancient Olympic Games (wrestling and boxing).⁵ The field of sports geography is a scientific discipline that examines the geographical distribution of elements within the domain of sport, as well as the impact of geography on the development and practice of sports.⁶ It is situated at the intersection of geography (from the discipline of earth and environmental sciences) and sport (from the discipline of physical culture sciences).⁷ In contrast to the history of combat sports and the Olympic movement, research on combat sports geography is rarely undertaken in the literature,⁸ hence the need for further investigation in this area.

The contemporary combat sports that are performed at the Olympic Games include boxing, fencing, judo, karate, modern pentathlon (due to the fact that one of the disciplines of the pentathlon is fencing and the entire competition refers to defensive skills, which are a utilitarian value of combat sports and are consistent with the principles of combat sports theory⁹), taekwondo and wrestling.¹⁰ The aim of this article is to analyse the achievements of Polish combat sports athletes to date and compare them with those of the other 19 Central and Eastern European countries. This will enable us to identify differences and similarities between the countries in our geographical region. The countries of Central and Eastern Europe include Albania, Belarus, Bosnia and Herzegovina,

³ J. Bagińska, P. Piepiora, Z. Piepiora, K. Witkowski, *The geography of Olympic combat sports – part one: judo, karate, taekwondo*, "Archives of Budo" 2022, vol. 18, pp. 169-178; J. Bagińska, P. Piepiora, Z. Piepiora, K. Witkowski, *The geography of Olympic combat sports – part two: boxing, fencing, modern pentathlon, wrestling*, "Archives of Budo" 2022, vol. 18, pp. 327-340.

⁴ X. Xu, Y. Sun, D. Zhu, *Analysis of the impact force and key technique of backward straight punch in different combat sports*, "Scientific Reports" 2025, vol. 15, pp. 10958.

⁵ T. C. B. Telles, R. P. T. Machado, *Wrestling, boxing and pankration: introducing the 'heavy events' in Ancient Olympic Games*, "Olimpianos – Journal of Olympic Studies" 2022, vol. 6, pp. 251-267.

⁶ L.M. DeChano-Cook, L.F. Hallett, *Challenges of teaching sports geography in higher education*, "Journal of Geography in Higher Education" 2023, vol. 48, no. 1, pp. 46–53; J. Bagińska, P. Z. Piepiora, P. A. Piepiora, *Geography of Olympic Combat Sports. Part three: dominance*, "Ido Movement for Culture Journal of Martial Arts Anthropology" 2025, vol. 25, no. 1, pp. 1-7.

⁷ N. Kvirkvelia, *Modern Approaches and Their Importance in the Teaching-Learning Process of Geography*, "Georgian Geographical Journal" 2023, vol. 3, no. 2.

⁸ A. Pawłucki, *Pedagogia olimpijska Homo physicus*, Kraków 2022; V. Menderetskyi, U. Nedilka, *Historical aspects of modern scientific problems of geography*, "Collection of scientific papers Kamianets. Podilsky Ivan Ohienko National University Pedagogical series" 2025, vol. 30, no. 30, pp. 16-20.

⁹ R. M. Kalina, *Teoria sportów walki*, Warszawa 2000.

¹⁰ J. Cvejić, N. Mihajlović, M. Durlević, *Influence of media on the popularization of combat sports*, "SPORTICOPEDIA – SMB" 2024, vol. 2, no. 1, pp. 195-204; L. Toskić, *Editorial: Combat sports in contemporary society: an interdisciplinary exploration*, "Frontiers in Sports and Active Living" 2025, vol. 7, pp. 1568909.

Bulgaria, Croatia, Czech Republic, Estonia, Hungary, Kosovo, Latvia, Lithuania, Moldova, Montenegro, North Macedonia, Poland, Romania, Serbia, Slovakia, Slovenia, and Ukraine.¹¹ This is a geographically expansive region with a complex history, diverse cultural and political pasts, and a varied population size and nationality. Despite these differences, the countries in this region share a common geographical proximity and a strong historical and cultural connection. Figure 1 illustrates the compact spatial distribution of these countries within Europe.

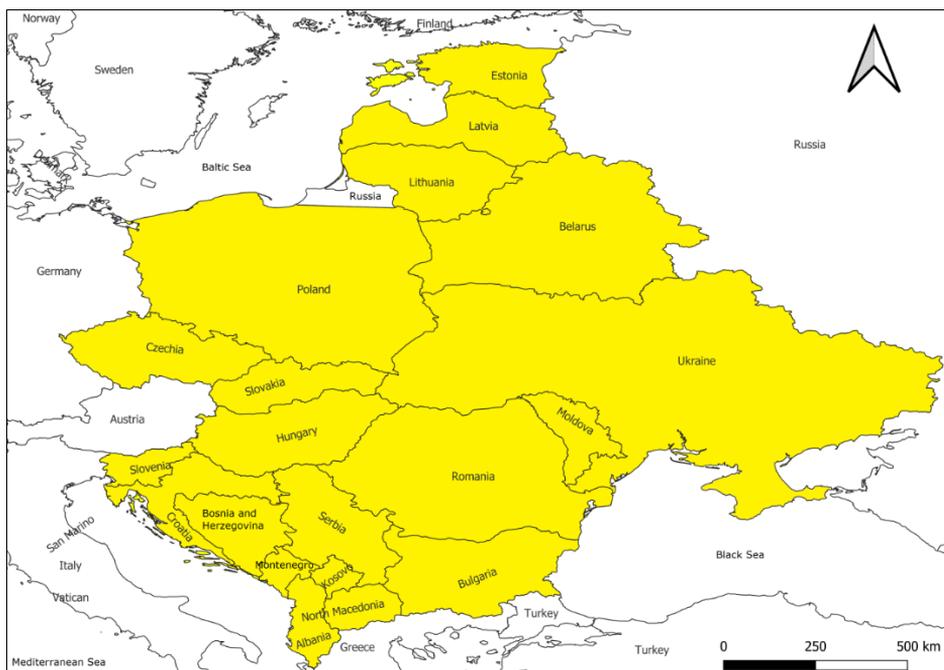


Fig. 1. Central and Eastern Europe countries

Source: own work based on [<https://www.naturalearthdata.com>]

Material and methods and research problems

The 2024 Olympic Games in Paris yielded 29 new medals for Central and Eastern European countries across the disciplines analysed, including two for Poland (team bronze in fencing and silver in boxing). This illustrates the popularity of these sports in our region.¹²

¹¹ T. Stępniewski, *Zrozumieć Europę Środkową od Haleckiego do Kłoczowskiego*, Lublin 2022.

¹² International Olympic Committee, *Olympic results*, 2024. <https://olympics.com/en/paris-2024/medals> [accessed: 08 Sept 2024].

The data analysed was sourced from the International Olympic Committee.¹³ The analysis encompasses the period from the inaugural modern Olympic Games in Athens in 1896 to the most recent edition in Paris in 2024. This time frame allows for the inclusion of individual combat sports, which were included in the Olympic disciplines at different times. Fencing and wrestling in the Greco-Roman style have been included in the Olympic programme since the inaugural modern Games in Athens in 1896. In 1900, Greco-Roman wrestling was removed from the Olympic program in Paris, but Greco-Roman and freestyle wrestling returned permanently to the Olympic program in 1904 in St. Louis. Boxing, on the other hand, was introduced at the 1904 Olympic Games in St. Louis, but this sport did not appear at the 1912 Olympics in Stockholm. In contrast, modern pentathlon has been part of the Olympic programme since the 1912 Games in Stockholm. Subsequently, in 1964, judo was introduced to the programme at the Olympic Games in Tokyo. In contrast, taekwondo made its inaugural appearance at the Sydney Olympic Games in 2000.¹⁴ The youngest Olympic combat sport is karate, which was introduced to the Tokyo Olympic Games programme in 2020. However, the Tokyo Olympics were held in 2021 due to the pandemic, and karate was removed from the program of the next Olympic Games in Paris.¹⁵ The gradual integration of the aforementioned combat sports into the Olympic programme was driven by their growing popularity, global prevalence, and, most crucially, their alignment with the criteria set forth by the IOC.¹⁶ Combat sports, present since the ancient Olympic Games, play a significant role in shaping national identity, especially in the modern context. Their presence in the Olympic program since ancient times, and subsequently in the modern Games, highlights their universal character and cultural significance. In regions where fighting traditions are deeply rooted, these sports have become a vehicle for national values, symbolizing strength, courage, and fighting spirit.¹⁷

The total medal points accrued by the representatives of each country were employed in the analyses, with the conversion factor of 5 points for gold,

¹³ International Olympic Committee, *Olympic results*, 2022. <https://olympics.com/en/olympic-games/olympic-results> [accessed: 25 Sept 2022].

¹⁴ G. Apollaro, B. Ruscello, *Exploring the age of taekwondo athletes in the Olympic Games: an analysis from Sydney 2000 to Rio 2016*, "The Journal of sports medicine and physical fitness" 2022, vol. 62, no. 6, pp. 838-845.

¹⁵ P. A. Piepiora, J. Vveinhardt, *Modern classification of types of karate competitors in kumite according to semi contact and full contact rules*, "Archives of Budo Journal of Innovative Agonology" 2025, vol. 21, pp. 47-57.

¹⁶ Z. Ma, *Looking Forward to The Future Olympic Games*, "2025 International Conference on Bio-materials, Computer Engineering and Ecological Environment (IBCEE 2025)" 2025, vol. 13, no. 1, pp. 1384-1392.

¹⁷ A. Pawlucky, *Olympic Opera*, "Ido Movement for Culture Journal of Martial Arts Anthropology" 2023, vol. 23, no. 4, pp. 56-67.

3 points for silver and 1 point for bronze medals being utilised. As the current political division of the countries of Central and Eastern Europe does not correspond to the political division throughout the period under analysis, due to geopolitical changes, medals won by athletes from the USSR, Yugoslavia, Czechoslovakia or the Commonwealth of Independent States were categorised into individual countries, taking into account the nationality of the athlete concerned. This is why, in some cases, fractional values can be observed in the tables. For instance, when the bronze medal in fencing was won by the five-member USSR team (Munich 1972 Olympic Games), with one athlete of Ukrainian nationality, Ukraine was allocated one-fifth of the medal points (0.2 points). This breakdown shows how geopolitical changes in Eastern Europe had a profound impact on the representation of individual countries in sport. Newly formed states had to build their own sporting identities, and international competition underwent significant changes. On the other hand, it emphasized the role of combat sports in the culture of newly established countries, their influence on the development of local sporting traditions and societies in which these disciplines play a significant role.¹⁸

The results of the study are presented in the form of proportional symbol maps and in tabular form, utilizing the QGIS 3.28 GIS software. The 'Cultural' cartographic base map at a scale of 1:10 000 000 available in the public domain was used to generate the figures 1-8.¹⁹

Results

Boxing

Boxing, along with wrestling and judo, is one of the most popular combat sports in our region, with competitors from as many as 15 countries having won medals in boxing (Fig. 2, Tab. 1). The most successful athletes in this region are from Poland (ranked first in the region and seventh in the world) and Hungary (ranked ninth in the world). At the Paris Games, Central and Eastern European countries secured three new medals: gold for Ukraine, silver for Poland, and bronze for Bulgaria.

¹⁸ A. Zoranic, *Modernism in the Case of Sports Architecture in Yugoslavia*, "IOP Conference Series: Materials Science and Engineering" 2020, vol. 960, pp. 022074.

¹⁹ Natural Earth, *Free vector and raster map data*, 2022. <https://www.naturalearthdata.com/> [accessed: 09 Nov 2022].

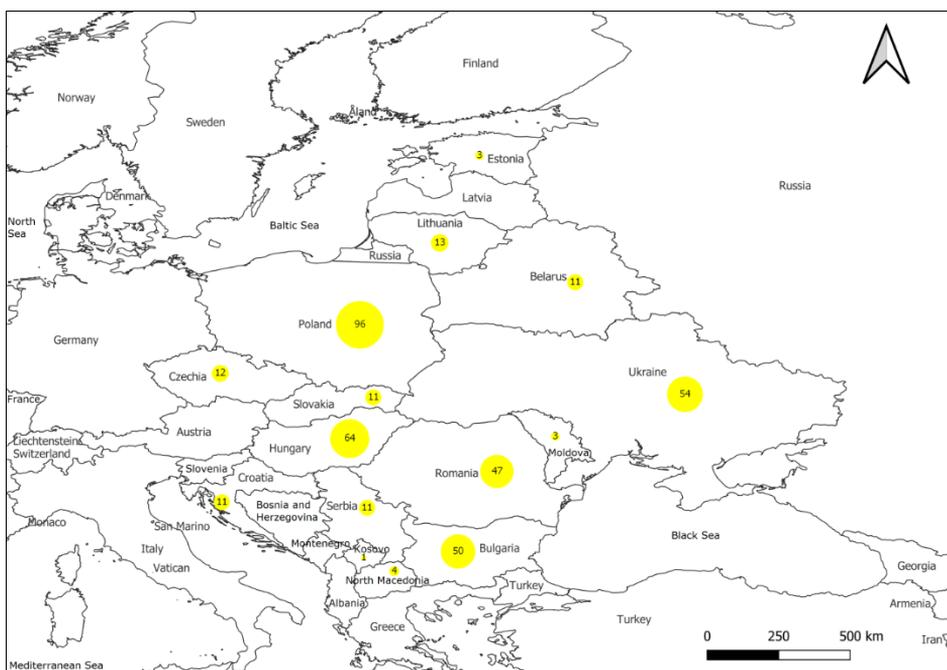


Fig. 2. Medal points in boxing

Source: own work based on [<https://www.naturearthdata.com>]

Tab. 1. Country's position in the world ranking and total medal points in boxing

No.	World ranking	Country	Total medal points
1	7	Poland	96
2	10	Hungary	64
3	12	Ukraine	54
4	15	Bulgaria	50
5	16	Romania	47
6	36	Lithuania	13
7	42	Czech Republic	12
8	43	Serbia	11
9	44	Belarus	11
10	45	Croatia	11
11	46	Slovakia	11
12	59	North Macedonia	4
13	63	Moldova	3
14	65	Estonia	3
15	73	Kosovo	1

Source: own study

Fencing

Fencing, like modern pentathlon, is a discipline in which the countries of our region have achieved notable success on the global stage, with their achievements deriving from the European fencing tradition. Eight countries in our region have been awarded medals in fencing (Fig. 3, Tab. 2). Similarly, Hungary is the leading nation in this field, ranking third globally, while Poland and Romania have attained notable positions in the global rankings, ranking seventh and ninth, respectively. Furthermore, the spatial concentration of medal-winning countries is evident in fencing (Fig. 3). During the Paris Games, countries in our region secured seven additional medals, thereby consolidating their position. Hungary won one gold, one silver, and one bronze medal, Ukraine won one gold and one bronze, and the Czech Republic and Poland each won one bronze.

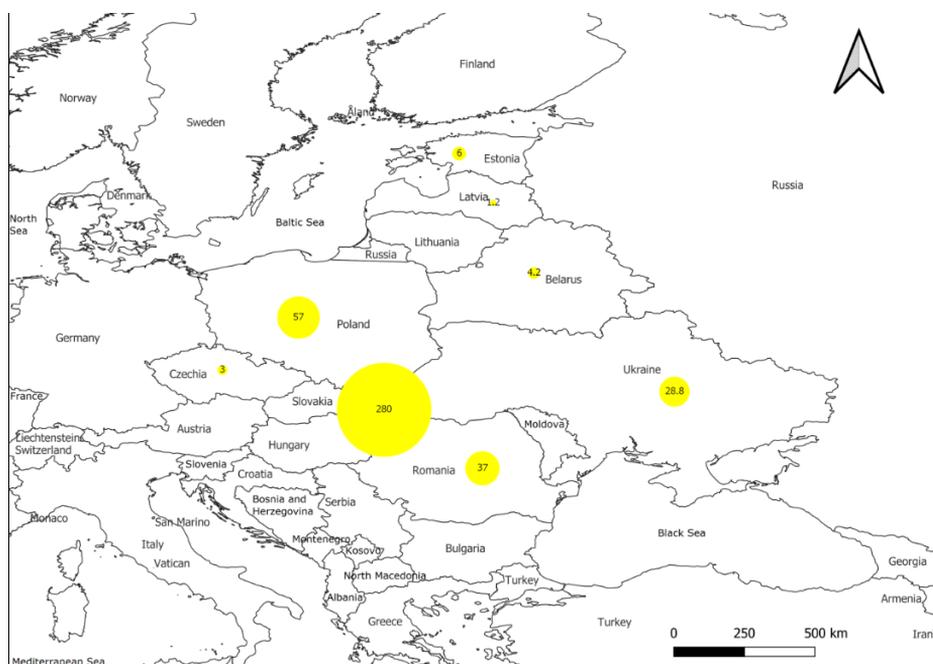


Fig. 3. Medal points in fencing

Source: own work based on [<https://www.naturalearthdata.com>]

Tab. 2. Country's position in the world ranking and total medal points in fencing

No.	World ranking	Country	Total medal points
1	3	Hungary	280
2	7	Poland	57
3	9	Romania	37
4	13	Ukraine	28.8

Table 3. Country's position in the world ranking and total medal points in judo

No.	World ranking	Country	Total medal points
1	16	Poland	26
2	20	Slovenia	21
3	21	Hungary	20
4	23	Kosovo	19
5	27	Romania	14
6	29	Czech Republic	11
7	32	Ukraine	6
8	34	Belarus	6
9	36	Croatia	6
10	37	Bulgaria	5
11	42	Estonia	3
12	44	Slovakia	3
13	47	Latvia	2
14	49	Moldova	2
15	52	Serbia	1

Source: own study

Karate

Karate, the youngest discipline of Olympic combat sports, has only been played once at the Tokyo Games and is not included in the 2024 Games programme. Nevertheless, representatives from four central and eastern European countries (Fig. 5, Tab. 4) have managed to win medals in the discipline, with Bulgaria and Serbia both ranking in the world top 10. There have been no Polish Olympic medallists in this discipline to date.

Modern pentathlon

Modern pentathlon is a complex discipline that requires all-round skills, including fencing, horse riding, shooting, running and swimming. Countries in Central and Eastern Europe have historically demonstrated a high level of success in this sport, with eight nations from the region having achieved Olympic victories. The country with the highest number of victories is Hungary, with Poland, Lithuania and the Czech Republic also featuring in the top ten (Fig. 6, Tab. 5). It is notable that these countries are geographically concentrated (Fig. 6). During the competition in Paris, Hungary won one gold medal, thereby reinforcing its leading position.

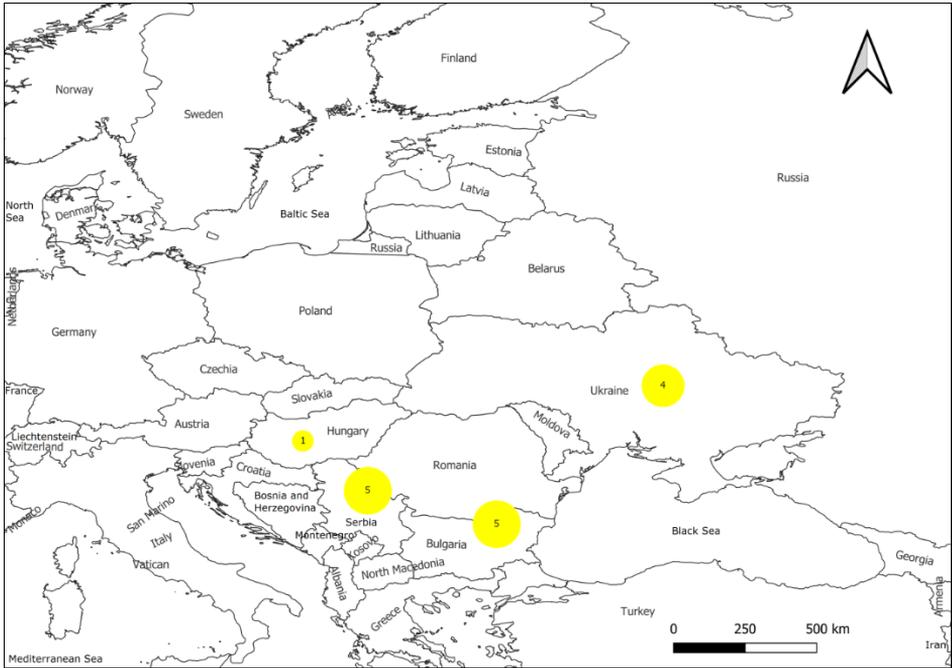


Fig. 5. Medal points in karate

Source: own work based on [<https://www.naturearthdata.com>]

Table 4. Country's position in the world ranking and total medal points in karate

No.	World ranking	Country	Total medal points
1	9	Bulgaria	5
2	10	Serbia	5
3	12	Ukraine	4
4	15	Hungary	1

Source: own study

Taekwondo

Despite the lack of popularity of taekwondo as a combat sport in our region, as evidenced by the outcomes of Olympic competitions, the most recent Olympic event in Paris has prompted a shift in this trend. Prior to the Tokyo Games, only three countries in our region, namely Serbia, Croatia and North Macedonia, had been represented in the medal tally. However, at the Paris Games, two additional countries were included in this group. It can be concluded that the popularity of this combat sport is growing in our region, as evidenced by the victories of Hungary (1 gold medal) and Bulgaria (1 bronze medal) (Fig. 7, Tab. 6). In Paris, countries from our group won a total of four new medals. In addition to

the previously mentioned Hungary and Bulgaria, representatives of Serbia and Croatia returned with medals (one silver and one bronze medal). It is noteworthy that Serbia and Croatia are also in the top 20 countries in the world. On the global stage, the discipline is dominated by its country of origin, South Korea. Like with karate, the Poles have yet to achieve Olympic success in taekwondo.

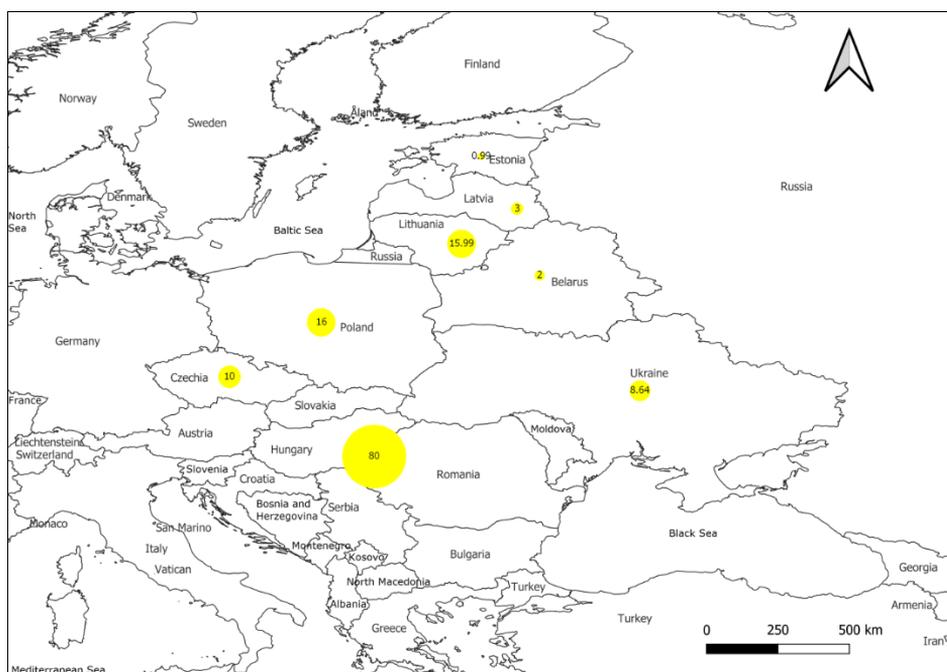


Fig. 6. Medal points in modern pentathlon

Source: own work based on [<https://www.naturalearthdata.com>]

Tab. 5. Country's position in the world ranking and total medal points in modern pentathlon

No.	World ranking	Country	Total medal points
1	1	Hungary	80
2	7	Poland	16
3	8	Lithuania	15.99
4	10	Czech Republic	10
5	11	Ukraine	8.64
6	18	Latvia	3
7	20	Belarus	2
8	25	Estonia	0.99

Source: own study

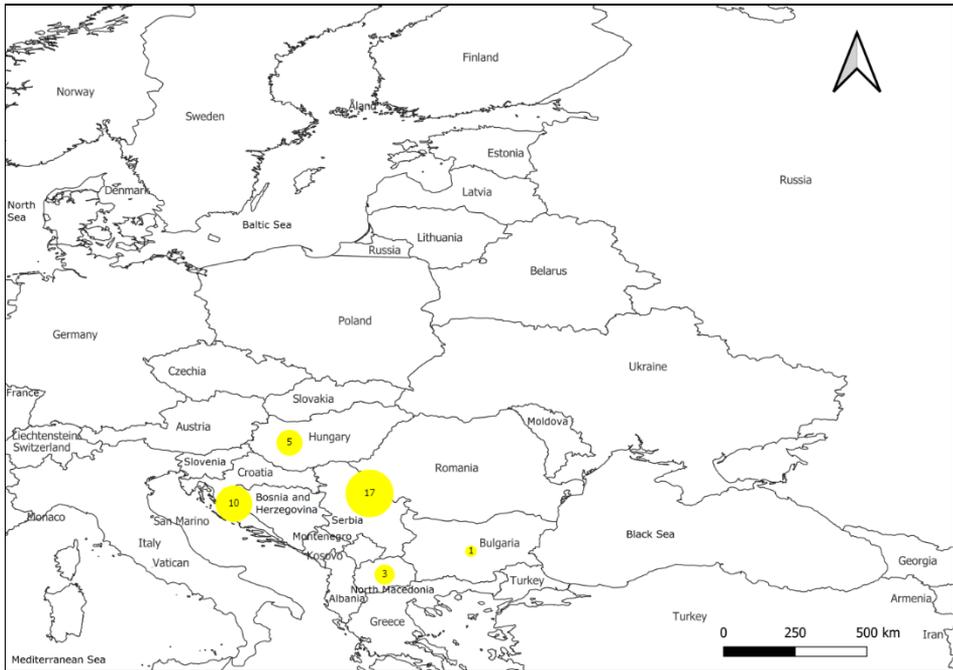


Fig. 7. Medal points in taekwondo

Source: own work based on [<https://www.naturalearthdata.com>]

Table 6. Country's position in the world ranking and total medal points in taekwondo

No.	World ranking	Country	Total medal points
1	13	Serbia	17
2	19	Croatia	10
3	29	Hungary	5
4	33	North Macedonia	3
5	44	Bulgaria	1

Source: own study

Wrestling

In the sport of wrestling, almost all countries in Central and Eastern Europe (16 out of 20 countries in the region) have achieved Olympic success, with Bulgaria and Hungary being particularly prominent, having attained the 7th and 8th place in the world respectively (Fig. 8, Tab. 7). In addition, Polish competitors have achieved notable success in wrestling, ranking 17th globally. The sport of wrestling has a long and rich history in Europe, which has contributed to its international achievements. At the Paris Games, athletes from Central and Eastern European countries secured eight new medals, including two gold, two sil-

ver, and one bronze for Bulgaria; two silvers and one bronze for Ukraine; one silver for Moldova; and two bronzes for Albania.

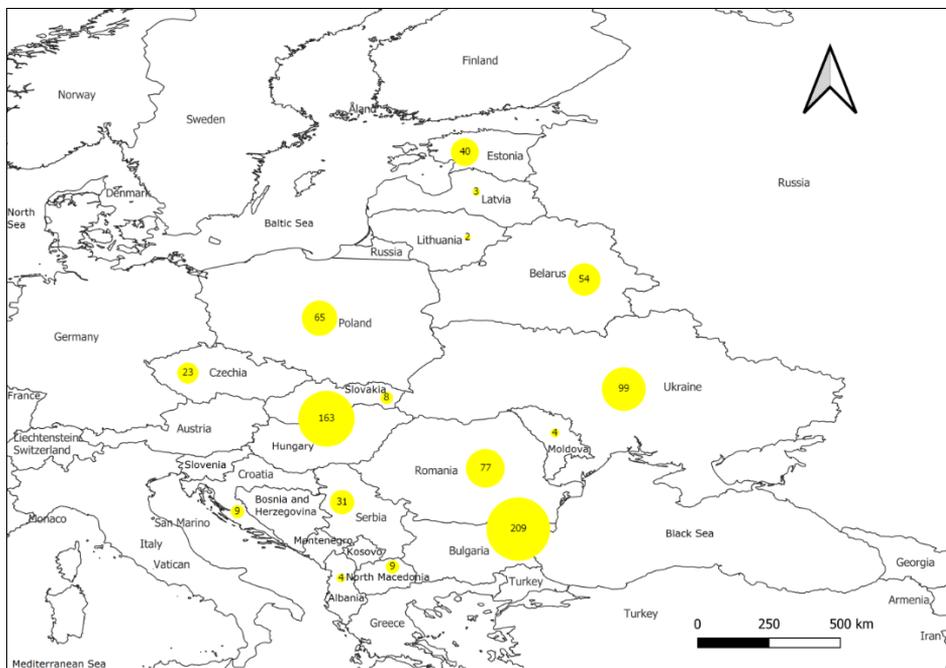


Fig. 8. Medal points in wrestling

Source: own work based on [<https://www.naturalearthdata.com>]

Tab. 7. Country's position in the world ranking and total medal points in wrestling

No.	World ranking	Country	Total medal points
1	7	Bulgaria	209
2	8	Hungary	163
3	13	Ukraine	99
4	15	Romania	77
5	17	Poland	65
6	19	Belarus	54
7	24	Estonia	40
8	29	Serbia	31
9	32	Czech Republic	23
10	40	Croatia	9
11	41	North Macedonia	9
12	42	Slovakia	8
13	45	Albania	4

Tab. 7. Country's position in the world ranking and total medal points in wrestling

No.	World ranking	Country	Total medal points
14	47	Moldova	4
15	50	Latvia	3
16	57	Lithuania	2

Source: own study

Discussion

The accomplishments of Central and Eastern European countries in Olympic competition in combat sports exhibit considerable variability (Fig. 9, Tab. 8). Hungary has the highest number of medal points (613), with a particularly strong performance in fencing and wrestling. Additionally, Hungary has achieved success in all combat sports analysed, with the first medal in taekwondo in 2024. The next countries to have achieved notable success, although with significantly fewer medal points, are Bulgaria and Poland (270 and 260 points, respectively). Bulgaria amassed the greatest number of medal points in wrestling and boxing; in only two combat sports (fencing and pentathlon), the country did not achieve any success. Poland achieved success at the Olympic Games in five of the seven disciplines under consideration, with Polish combat sports athletes gaining the most medal points in boxing, wrestling and fencing. Additionally, Ukraine and Romania have achieved a score of over one hundred points in the Olympic competition, with a total of 200.44 and 175 points, respectively. Notably, both countries have demonstrated the greatest success in boxing and wrestling. The remaining countries in the region have achieved comparatively little success, with the majority of medals won in wrestling, boxing and judo. To date, only two countries in the region – Bosnia and Herzegovina and Montenegro – have failed to win any medals in the disciplines under analysis.

The 2024 Olympic Games held in Paris yielded new data and facilitated new successes in combat sports. In total, Central and Eastern European countries secured 29 new medals (6 in judo, 4 in taekwondo, 1 in pentathlon, 7 in fencing, 3 in boxing and 8 in wrestling), including several instances of their inaugural successes in the discipline. Moldova achieved its inaugural medal success in judo, while Hungary and Bulgaria attained their first medals in taekwondo. In the combat sports analysed, Polish athletes were awarded two medals: one in boxing and one in team fencing. Notably, these were both won by women.

It should be noted that sports disciplines, including combat sports, are not permanently included in the Games programme.²⁰ For example, karate was not included in the programme of the Paris Games, and modern pentathlon has

²⁰ W. Lipoński, *Rattle Running, Dry Wrestling, and Boxing in ... Opera, or Regional Sports and Games in the Historical and Cultural Tradition of Eastern Europe*, "The International Journal of the History of Sport" 2017, vol. 34, no. 10, pp. 899–914.

been undergoing modifications for several editions of the Games.²¹ The article has filled the existing research gap concerning geography of Olympic combat sports in Central and Eastern Europe, including Poland. A line of research on the geography of combat sports that is planned for the near future is the participation of women in combat sports and its temporal changes.

It should be noted that the medals for Poland were won by women, which is a very important aspect, especially in the context of the growing role of women in Olympic sports. In general, there has been an increase in the number of women training in Olympic combat sports, which is an interesting direction for future research.²²

In addition, some countries have been less successful in the disciplines analysed. This may be due to a lack of national tradition in a given sport, a lack of infrastructure, insufficient support for the development of that discipline in a given country, or, in general, a decline in the popularity of a given combat sport in the region.²³

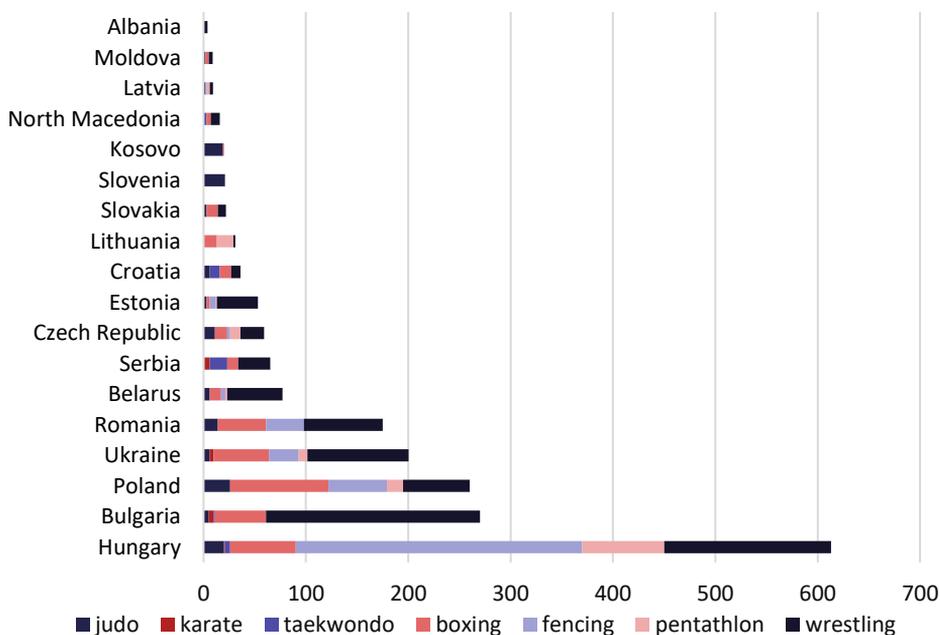


Fig. 9. Sum of points won by Central and Eastern European countries in combat sports at the modern Olympic Games

Source: own study

²¹ L. Rappelt, L. Donath, *Changing Horses in Midstream: Modern Pentathlon After the 2024 Olympic Games*, "International Journal of Sports Physiology and Performance" 2024, vol. 19, no. 11, pp. 1347–1352.

²² Z. Dziubiński, Z. Krawczyk, M. Lenartowicz M., *Socjologia kultury fizycznej*, Akademia Wychowania Fizycznego Józefa Piłsudskiego w Warszawie 2019.

²³ M. Tomecka M., *Socjologia ogólna i kultury fizycznej*, Akademia Wychowania Fizycznego im. Jerzego Kukuczki w Katowicach 2019.

Tab. 8. Points scored by Central and Eastern European countries in individual martial arts at the modern Olympic Games

No.	Country	Boxing	Fencing	Judo	Karate	Modern pentathlon	Taekwondo	Wrestling	Total number of points
1	Hungary	64	280	20	1	80	5	163	613
2	Bulgaria	50	0	5	5	0	1	209	270
3	Poland	96	57	26	0	16	0	65	260
4	Ukraine	54	28.8	6	4	8.64	0	99	200.44
5	Romania	47	37	14	0	0	0	77	175
6	Belarus	11	4.2	6	0	2	0	54	77.2
7	Serbia	11	0	1	5	0	17	31	65
8	Czech Republic	12	3	11	0	10	0	23	59
9	Estonia	3	6	3	0	0.99	0	40	52.99
10	Croatia	11	0	6	0	0	10	9	36
11	Lithuania	13	0	0	0	15.99	0	2	30.99
12	Slovakia	11	0	3	0	0	0	8	22
13	Slovenia	0	0	21	0	0	0	0	21
14	Kosovo	1	0	19	0	0	0	0	20
15	North Macedonia	4	0	0	0	0	3	9	16
16	Latvia	0	1.2	2	0	3	0	3	9.2
17	Moldova	3	0	2	0	0	0	4	9
18	Albania	0	0	0	0	0	0	4	4

Source: own study

Conclusions

The most popular combat sports in the countries of our historical-geographical area are wrestling, boxing and judo, with 16, 15 and 15 medal-winning countries respectively, while the least popular are taekwondo and karate, with 5 and 4 medal-winning countries respectively. Modern pentathlon and fencing are of average popularity (8 medal-winning countries each), however, it is notable that the countries of our region occupy a prominent position in the world rankings for these disciplines.

The largest and most populous countries in our region, namely Hungary, Bulgaria, Poland, Ukraine and Romania, have secured the greatest number of medal points in combat sports. Among the combat sports analysed, Polish competitors have achieved the highest rankings in boxing, fencing and pentathlon. However,

in the Far Eastern combat sports that are represented at the Olympic Games, Polish athletes have only attained success in judo, and their performance in this discipline is not among the top ten in the world.

The countries of Central and Eastern Europe have been found to have the most Olympic successes in combat sports that are linked to the history and culture of our region. This is due to the fact that wrestling and boxing require a high degree of physical stamina, direct contact with the opponent, and do not require special equipment to practise them, thus making them quite accessible to many people. In contrast, fencing and pentathlon draw on several centuries of European equestrian and fencing traditions. The Far Eastern martial arts, karate and taekwondo, have been the least successful for Central and Eastern European athletes, although taekwondo is showing increasing popularity. The exception is judo, which is a combat sport in which many of the movements are similar to wrestling, hence the successes of athletes from our region. The conducted analysis delivered new, up to date knowledge on combat sports at the Olympic games, with focus on Poland.

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Conceptualization – JB, ZNP & PAP; Methodology – JB, ZNP & PAP; Software – JB, ZNP & PAP; Validation – JB, ZNP & PAP; Formal analysis – JB, ZNP & PAP; Investigation – JB, ZNP & PAP; Resources – JB, ZNP & PAP; Data Curation – JB, ZNP & PAP; Writing - Original Draft – JB, ZNP & PAP; Writing - Review and Editing – JB, ZNP & PAP; Visualization – JB, ZNP & PAP; Supervision – JB, ZNP & PAP; Project administration – JB, ZNP & PAP; Funding acquisition – JB, ZNP & PAP.

References

Internet sources

International Olympic Committee, *Olympic results*, 2022. <https://olympics.com/en/olympic-games/olympic-results> [accessed: 25 Sept 2022].

International Olympic Committee, *Olympic results*, 2024. <https://olympics.com/en/paris-2024/medals> [accessed: 08 Sept 2024].

Natural Earth, *Free vector and raster map data*, 2022. <https://www.naturalearthdata.com/> [accessed: 09 Nov 2022].

Literature

- Apollaro G., Ruscello B., *Exploring the age of taekwondo athletes in the Olympic Games: an analysis from Sydney 2000 to Rio 2016*, "The Journal of sports medicine and physical fitness" 2022, vol. 62, no. 6, pp. 838-845. <https://doi.org/10.23736/S0022-4707.21.12768-9>.
- Bagińska J., Piepiora P., Piepiora Z., Witkowski K., *The geography of Olympic combat sports – part one: judo, karate, taekwondo*, "Archives of Budo" 2022, vol. 18, pp. 169-178.
- Bagińska J., Piepiora P., Piepiora Z., Witkowski K., *The geography of Olympic combat sports – part two: boxing, fencing, modern pentathlon, wrestling*, "Archives of Budo" 2022, vol. 18, pp. 327-340.
- Bagińska J., Piepiora Z.N., Piepiora P.A., *Geography of Olympic Combat Sports. Part three: dominance*, "Ido Movement for Culture Journal of Martial Arts Anthropology" 2025, vol. 25, no. 1, pp. 1-7. <http://dx.doi.org/10.14589/ido.25.1.1>.
- Cvejić J., Mihajlović N., Durlević M., *Influence of media on the popularization of combat sports*, "SPORTICOPEDIA – SMB" 2024, vol. 2, no. 1, pp. 195-204. <https://doi.org/10.58984/smbic240201195c>
- Cynarski W. J., Sieber L., Obodyński K., Ďuriček M., Król P., Rzepko M., *Factors of Development of Far Eastern Martial Arts in Central Europe*, "Journal of Human Kinetics" 2009, vol. 22, pp. 69-75. <https://doi.org/10.2478/v10078-009-0025-2>.
- DeChano-Cook L. M., Hallett L.F., *Challenges of teaching sports geography in higher education*, "Journal of Geography in Higher Education" 2023, vol. 48, no. 1, pp. 46–53. <https://doi.org/10.1080/03098265.2023.2198198>.
- Dziubiński Z., Krawczyk Z., Lenartowicz M., *Socjologia kultury fizycznej*, Akademia Wychowania Fizycznego Józefa Piłsudskiego w Warszawie 2019.
- Kalina R. M., *Teoria sportów walki*, Centralny Ośrodek Sportu, Warszawa 2000.
- Kvirkvelia N., *Modern Approaches and Their Importance in the Teaching-Learning Process of Geography*, "Georgian Geographical Journal" 2023, vol. 3, no. 2. <https://doi.org/10.52340/ggj.2023.03.02.16>.
- Lipoński W., *Rattle Running, Dry Wrestling, and Boxing in ... Opera, or Regional Sports and Games in the Historical and Cultural Tradition of Eastern Europe*, "The International Journal of the History of Sport" 2017, vol. 34, no. 10, pp. 899–914. <https://doi.org/10.1080/09523367.2017.1408587>.

- Ma Z., *Looking Forward to The Future Olympic Games*, "2025 International Conference on Biomaterials, Computer Engineering and Ecological Environment (IBCEE 2025)" 2025, vol. 13, no. 1, pp. 1384-1392. <https://doi.org/10.56028/aetr.13.1.1384.2025>.
- Menderetskiy V., Nedilska U., *Historical aspects of modern scientific problems of geography*, "Collection of scientific papers Kamianets. Podilsky Ivan Ohienko National University Pedagogical series" 2025, vol. 30, no. 30, pp. 16-20. <http://dx.doi.org/10.32626/2307-4507.2024-30.16-20>.
- Pawłucki A., *Olympic Opera*, "Ido Movement for Culture Journal of Martial Arts Anthropology" 2023, vol. 23, no. 4, pp. 56–67. <http://dx.doi.org/10.14589/ido.23.4.7>.
- Pawłucki A., *Pedagogia olimpijska Homo physicus*, Oficyna Wydawnicza Impuls, Kraków 2022.
- Piepiora P. A., Vveinhardt J., *Modern classification of types of karate competitors in kumite according to semi contact and full contact rules*, "Archives of Budo Journal of Innovative Agonology" 2025, vol. 21, pp. 47-57.
- Rappelt L., Donath L., *Changing Horses in Midstream: Modern Pentathlon After the 2024 Olympic Games*, "International Journal of Sports Physiology and Performance" 2024, vol. 19, no. 11, pp. 1347–1352. <https://doi.org/10.1123/ijsp.2024-0163>.
- Reid H., *Olympic Philosophy: The Ideas and Ideals behind the Ancient and Modern Olympic Games*, Parnassos Press, Sioux City 2020.
- Stępniewski T., *Zrozumieć Europę Środkową od Haleckiego do Kłoczowskiego*, Instytut Europy Środkowej, Lublin 2022.
- Telles T. C. B., Machado R.P.T., *Wrestling, boxing and pankration: introducing the 'heavy events' in Ancient Olympic Games*, "Olimpianos – Journal of Olympic Studies" 2022, vol. 6, pp. 251-267. <http://dx.doi.org/10.309370/2526-6314.v6.id165>.
- Tomecka M., *Socjologia ogólna i kultury fizycznej*, Akademia Wychowania Fizycznego im. Jerzego Kukuczki w Katowicach 2019.
- Toskić L., *Editorial: Combat sports in contemporary society: an interdisciplinary exploration*, "Frontiers in Sports and Active Living" 2025, vol. 7, pp. 1568909. <https://doi.org/10.3389/fspor.2025.1568909>.
- Xu X., Sun Y., Zhu D., *Analysis of the impact force and key technique of backward straight punch in different combat sports*, "Scientific Reports" 2025, vol. 15, pp. 10958. <https://doi.org/10.1038/s41598-025-96264-4>.
- Zoranic A., *Modernism in the Case of Sports Architecture in Yugoslavia*, "IOP Conference Series: Materials Science and Engineering" 2020, vol. 960, pp. 022074. <https://doi.org/10.1088/1757-899X/960/2/022074>.