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THE DYNAMICS OF ATHLETIC PERFORMANCES IN THE SEMIFOND TRIALS FOR THE FINALISTS IN THE ANCIENT OLYMPICS GAMES

Case
Study

Keywords

*Olympic Games,
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Abstract

The best results recorded for the 3rd-8th places in the men's 800m event were obtained in the year 2012, during the Olympic Games from London, when the performance for the 3rd place was below 1:43.00, while the following places have small differences between each other – 8th place obtained 1:43.77. The better and better performances and the increasingly developed show during the great athletic competitions (Olympic Games) and the desire to get more information concerning the evolution of the performances in the medium-distance running events, made us choose the present subject. The evolution of the results for the 3rd to 8th places in the Olympic Games, for the medium distance events, has shown an oscillating dynamics from one edition to another, based on multiple factors that cannot always be controlled. The purpose of the present study is to highlight the aspects related to the dynamics of the sportive performance in the medium-distance athletic events during the Olympic Games, as well as to render an as objective and complete opinion as possible, on the evolution of the results for the 3rd to 8th places.

INTRODUCTION

Since 1896, when the Olympic Games were re-established, the running events, the medium and long distance events and the marathon events have become particularly attractive, which is also due to the great sportsmen and sportswomen involved, some of the participants in such events becoming national heroes: Spiridon Louis (marathon), Kip Keino and Paavo Nurmi (1500m), Melvin SHEPPARD (1500m, 800m) Peter Snell (800m, 1500m), Alberto Juantorena (800m), Sebastian Coe, Noureddine Morceli, Hicham El Guerrouj, etc. In what concerns the appearance of the two running events (800 m, 1500 m) as part of women's competitions, they came into being at 46 years distance from one another (Țifrea, C., *Atletism – Efortul de antrenament și de concurs*). At the same time, women's athletics are admitted in the Olympic Games in 1928. The first 800 m event took place in 1921 and was won by Lucia Bréard with the timing 2:30.15 (Van Looy, H., *Olympism in Antiquity*). The first Olympic medal was won by Kalke H. with 2:16.15, and the first athlete woman that finished the race in less than 2:00.0 was N. Falck (1:58.5 in 1972). The 1500 m event was established in 1967, while the first world and European woman record holder was A. Smith with the timing 4:17.3 in 1967.

The better and better performances and the increasingly developed show during the great athletic competitions (Olympic Games) and the desire to get more information concerning the evolution of the performances in the medium-distance running events, made us choose the present subject.

The evolution of the results for the 3rd to 8th places in the Olympic Games, for the medium distance events, has shown an oscillating dynamics from one edition to another, based on multiple factors that cannot always be controlled (Schaller G., Hennaux J., 2004)

The purpose of the present study is to highlight the aspects related to the dynamics of the sportive performance in the medium-distance athletic events during the Olympic Games, as well as to render an as objective and complete opinion as possible, on the evolution of the results for the 3rd to 8th places (Șiperco, A., 1976).

The statistical analysis of the finalists, of the 3rd to 8th places, respectively, can provide information about the training level of an athlete in order to accede to this final stage.

The results of the women's and men's medium-distance events have developed, meaning that it generally has become more difficult to reach the adequate performances for a good place in the final (Barbu C., 1998).

One can notice that the Olympic Games greatly develop from one edition to another (for example:

while 24 nations participated at the Olympic Games from Athens in 1896, for 18 sports events, 997 athletes - 22 women, 975 men, 10 countries succeeded in winning at least one medal, at the Olympic Games from London 2012, there were 10.820 sports persons coming from 204 countries, for 304 sports events belonging to 26 sports, 76 countries succeeded in winning at least one medal (Vrabie, A., Dorneanu, L., 2004).

• When comparatively analysing the results of the 27 editions of the Olympic Games:

For the men's 800m event we can notice a difference of:

-45 seconds for the 3rd place, difference between Athens 1896 and London 2012;

-12 seconds for the 4th place, difference between London 1908 and London 2012;

-13 seconds for the 5th place, difference between London 1908 and London 2012;

-10 seconds for the 6th place, difference between Stockholm 1912 and London 2012;

-13 seconds for the 7th place, difference between Antwerp 1920 and London 2012;

-15 seconds for the 8th place, difference between Antwerp 1920 and London 2012.

We can notice a progressive growth related to the 3rd place from one edition to another, in what concerns the results until the year 1968 (Mexico), then starting with the year 1972 there is a small oscillation (between 1:42.7 and 1:42.53);

• For the 4th place, the results evolution have an ascending, but oscillating trend;

• For the 5th place, the best result was achieved in the year 2012 in London. The evolution of the results has also an ascending, yet oscillating trend after the year 1972;

• For the 6th place, the best result was achieved in the year 2012, in London. We can observe a progressive evolution from one edition to another, until the year 1968, and starting with the year 1972 we can notice a results oscillation of maximum 2 seconds.

• For the 7th place the best result was obtained in the year 2012, in London. We can also observe an oscillating growth here starting with the very first editions of the Olympic Games.

• For the 8th place we can observe the greatest oscillation of the results, with the best result obtained in London (1:43.77), and the weakest result obtained in 1920 in Antwerp.

CONCLUSIONS

• The assumption according to which "the evolution of the results for the places III – VIII at the Olympic Games, for the medium-distance events, shows an oscillating dynamics from one edition to another" has been confirmed, the statistical analysis

of the data regarding the 27 editions of the greatest competition certifying this thing;

- The results evolution at the Olympic Games for the medium-distance events, obtained by the athletes on the 3rd to 8th places, shows a constant development of the performances from one edition to another, but only until the '70s, afterwards there is an oscillating trend;
- Until the '70s we can notice an ascending evolution of the results for the analysed places, an evolution that might also be the consequence of modernization of the running tracks, of sports equipment, the consequence of improvement of the training methodology following particular scientific researches, of effort supporting and recovery medication;
- The 27 analysed editions show a performance development in time, but with increasingly smaller differences between results, which could lead to the interpretation that the performances of the medium-distance events athletes have come close to biological limits of the human being, reaching very high values;
- After studying the speciality literature, we have also come to the conclusion that after the 1980s, both for the places I-II, and for the places III – VIII, the performances were also affected by the tactical races that have as object the place obtained, not the performance (establishment of Grand prix, Golden League, Diamond League with high financial rewards, an increase of the official competitions, etc. entailed a tactical approach of the races, especially in what concerns the greatest athletic competitions, to the detriment of the time-related results);
- The performance evolution along several editions of the same competition depends on the generation of athletes that represent at that certain time the “top” in that sports event;
- The performance evolution of a sports person during his/her practice of an athletic event is permanently affected by a lot of factors, which cannot be controlled all the time;
- In order to achieve a valuable performance for any athletic event, the nowadays requirements set a scientifically conceived training process, which is adapted and excessively customized.

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Table no. 1 - Olympic Games - 800m men

No	EDITION	LOCALITY	Results 3 rd place	Results 4 th place	Results 5 th place	Results 6 th place	Results 7 th place	Results 8 th place	Average for the 3 rd -8 th places
1.	1896	ATENA	2.28.0	-	-	-	-	-	2:28.0
2.	1900	PARIS	2.03.0	N/A	N/A	N/A	-	-	2:03.0
3.	1904	ST LUIS	1.56.4	N/A	N/A	N/A	-	-	1:56.4
4.	1908	LONDRA	1.55.2	1.55.4	1.56.4	N/A	DSQ	DSQ	1:55.66
5.	1912	STOCKHOLM	1.52.0	1.52.8	1.53.0	1.53.0	N/A	N/A	1:52.70
6.	1920	ANTWERP	1.54.0	1.54.6	1.56.0	1.56.4	1.56.4	1.58.0	1:55.90
7.	1924	PARIS	1.52.9	1.53.0	1.53.7	1.54.2	1.54.8	1.56.7	1:54.21
8.	1928	AMSTERDAM	1.53.2	1.54.0	1.54.2	1.54.6	1.55.0	1.57.0	1:54.66
9.	1932	LOS ANGELES	1.51.5	1.51.7	1.51.7	1.52.7	1.53.1	1.53.6	1:53.05
10.	1936	BERLIN	1.53.6	1.53.6	1.53.8	1.54.6	1.55.8	N/A	1:54.28
11.	1948	LONDRA	1.49.8	1.50.1	1.50.5	1.52.1	1.53.0	1.53.4	1:51.48
12.	1952	HELSINKY	1.49.7	1.49.7	1.50.2	1.50.6	1.52.1	1.52.1	1:50.73
13.	1956	MELBOURNE	1.48.1	1.48.3	1.49.2	1.49.3	1.51.8	1.52.5	1:49.86
14.	1960	ROMA	1.47.1	1.47.6	1.48.1	1.52.0	-	-	1:48.70
15.	1964	TOKIO	1.45.9	1.45.9	1.46.6	1.47.0	1.47.2	1.50.5	1:47.18
16.	1968	MEXICO	1.45.4	1.45.8	1.45.9	1.46.2	1.47.5	1.54.3	1:47.51
17.	1972	MUNCHEN	1.46.0	1.46.5	1.46.5	1.46.6	1.47.1	1.48.0	1:46.78
18.	1976	MONTREAL	1.44.12	1.45.26	1.45.44	1.45.75	1.45.77	1.48.39	1:45.78
19.	1980	MOSCOVA	1.45.94	1.46.20	1.46.81	1.46.91	1.47.26	1.49.25	1:47.06
20.	1984	LOS ANGELES	1.43.83	1.44.03	1.44.53	1.44.86	1.47.89	1.52.28	1:46.23
21.	1988	SEUL	1.44.06	1.44.12	1.44.80	1.46.39	1.48.03	1.49.55	1:46.15
22.	1992	BARCELONA	1.43.97	1.45.06	1.45.23	1.45.57	1.48.34	DNF	1:45.63
23.	1996	ATLANTA	1:42.79	1:42.85	1:43.91	1:44.19	1:44.21	1:45.52	1:43.91
24.	2000	SYDNEY	1:45.16	1:45.29	1:45.40	1:45.83	1:46.24	DSQ	1:45.28
25.	2004	ATENA	1:44.65	1:45.16	1:45.31	1:45.53	1:45.61	1:52.49	1:46.45
26.	2008	BEIJING	1:44.82	1:44.94	1:44.95	1:45.88	1:45.96	1:47.19	1:45.62
27.	2012	LONDRA	1:42.53	1:42.82	1:42.95	1:43.20	1:43.32	1:43.77	1:43.16

Table no. 2 - Olympic Games - 1500m men

No	EDITION	LOCALITY	Results 3 rd place	Results 4 th place	Results 5 th place	Results 6 th place	Results 7 th place	Results 8 th place	Average for the 3 rd -8 th places
1.	1896	ATENA	4.37.0	N/A	-	-	-	-	4:37.0
2.	1900	PARIS	4.10.2	N/A	N/A	N/A	-	-	4:10.20
3.	1904	ST LUIS	N/A	N/A	N/A	N/A	-	-	-
4.	1908	LONDRA	4.04.0	4.06.8	4.07.6	4.07.9	DNF	DNF	4:06.57
5.	1912	STOCKHOLM	3.56.9	3.57.2	3.57.6	3.59.6	4.02.0	4.02.2	3:59.25
6.	1920	ANTWERP	4.03.3	4.04.6	4.06.3	4.06.4	4.06.6	4.10.0	4:06.10
7.	1924	PARIS	3.55.6	3.57.0	3.58.5	3.59.0	3.59.9	4.00.3	3:38.38
8.	1928	AMSTERDAM	3.56.4	3.56.8	3.57.6	3.58.4	3.59.0	4.00.0	3:58.03
9.	1932	LOS ANGELES	3.52.8	3.53.4	3.54.6	3.55.0	3.55.6	3.56.6	3:54.66
10.	1936	BERLIN	3.49.2	3.50.0	3.50.4	3.51.4	3.53.0	3.53.8	3:31.30
11.	1948	LONDRA	3.50.4	3.51.2	3.52.2	3.52.6	3.52.8	3.52.8	3:52.30
12.	1952	HELSINKY	3.45.4	3.46.0	3.46.0	3.46.8	3.47.0	3.47.6	3:46.46
13.	1956	MELBOURNE	3.42.0	3.42.4	3.42.6	3.42.6	3.42.8	3.43.0	3:42.56
14.	1960	ROMA	3.39.2	3.40.0	3.40.8	3.40.8	3.41.5	3.45.0	3:41.21
15.	1964	TOKYO	3.39.6	3.39.7	3.40.0	3.40.3	3.41.2	3.42.4	3:40.53
16.	1968	MEXICO	3.39.0	3.42.5	3.43.8	3.46.6	3.46.6	3.48.6	3:34.5
17.	1972	MUNCHEN	3.37.5	3.38.4	3.39.0	3.39.1	3.40.1	3.40.2	3:39.05
18.	1976	MONTREAL	3.39.33	3.39.51	3.39.65	3.40.64	3.40.94	3.41.80	3:40.31
19.	1980	MOSCOVA	3.38.99	3.40.17	3.40.37	3.40.66	3.41.48	3.41.98	3:40.60
20.	1984	LOS ANGELES	3.34.30	3.34.52	3.36.07	3.36.97	3.37.02	3.37.11	3:35.99
21.	1988	SEUL	3.36.21	3.36.24	3.36.99	3.37.03	3.37.04	3.37.11	3:36.92
22.	1992	BARCELONA	3.40.69	3.41.12	3.41.27	3.41.53	3.41.70	3.41.74	3:41.34
23.	1996	ATLANTA	3.36.72	3.37.39	3.37.42	3.38.03	3.38.18	3.38.19	3:37.65
24.	2000	SYDNEY	3.32.44	3.34.14	3.35.50	3.36.78	3.37.27	3.38.91	3:35.84
25.	2004	ATENA	3.34.68	3.35.61	3.35.82	3.36.63	3.36.63	3.37.17	3:36.04
26.	2008	BEIJING	3:34.21	3:34.44	3:34.66	3:34.77	3:35.23	3:35.37	3:34.61
27.	2012	LONDRA	3:35.13	3:35.17	3:35.43	3:35.44	3:36.19	3:36.72	3:35.06

Table no. 3 - Olympic Games – 800m women
Athens 1896 – Roma 1960, women's 800m event was not part of the Olympic Games programme

No	EDITION	LOCALITY	Results 3 rd place	Results 4 th place	Results 5 th place	Results 6 th place	Results 7 th place	Results 8 th place	Average for the 3 rd -8 th places
1.	1964	TOKYO	2.05.6	2.05.9	2.06.5	2.07.8	2.08.0	2.11.8	2:07.60
2.	1968	MEXICO	2.02.6	2.03.5	2.03.9	2.05.1	2.05.8	2.05.8	2:04.45
3.	1972	MUNCHEN	1.59.2	1.59.7	2.00.0	2.00.0	2.00.2	2.00.2	1:59.88
4.	1976	MONTREAL	1.55.60	1.55.74	1.56.44	1.57.21	1.58.99	2.02.21	1:57.69
5.	1980	MOSCOVA	1.55.46	1.56.21	1.57.20	1.58.25	1.58.71	1.59.12	1:57.49
6.	1984	LOS ANGELES	1.58.83	1.59.05	2.00.03	2.00.34	2.00.65	2.00.77	1:59.94
7.	1988	SEUL	1.56.91	1.57.50	1.57.80	1.59.37	1.59.82	2.00.77	1:58.69
8.	1992	BARCELONA	1.56.80	1.57.20	1.57.49	1.57.95	1.58.06	1.58.13	1:57.60
9.	1996	ATLANTA	1.58.71	1.58.81	1.59.57	1.59.61	2.00.32	2.00.54	1:58.79
10.	2000	SYDNEY	1.56.80	1.58.51	1.58.56	1.58.66	1.58.75	1.59.27	1:58.42
11.	2004	ATENA	1.56.43	1.56.51	1.56.88	1.57.27	1.59.62	2.00.95	1:57.92
12.	2008	BEIJING	1:56.73	1:56.94	1:57.68	1:58.24	1:58.73	2:02.63	1:65.15
13.	2012	LONDRA	1:57.53	1:57.59	1:57.93	1:59.21	1:59.63	2:00.19	1:65.05

Table no. 4 - Olympic Games – 1500m women
Athens 1896 - Mexico 1968, women's 1500m event was not part of the Olympic Games programme

No.	EDITION	LOCALITY	Results 3 rd place	Results 4 th place	Results 5 th place	Results 6 th place	Results 7 th place	Results 8 th place	Average for the 3 rd -8 th places
1.	1972	MUNCHEN	4.02.9	4.04.1	4.04.8	4.05.1	4.06.5	4.12.2	4:05.93
2.	1976	MONTREAL	4.06.19	4.06.57	4.07.20	4.07.27	4.07.91	4.08.54	4:07.28
3.	1980	MOSCOVA	3.59.6	4.00.3	4.00.7	4.01.3	4.01.3	4.03.0	4:01.03
4.	1984	LOS ANGELES	4.04.15	4.04.41	4.04.70	4.05.53	4.05.98	4.08.92	4:05.61
5.	1988	SEUL	4.00.30	4.00.64	4.00.86	4.00.96	4.02.32	4.02.49	4:01.26
6.	1992	BARCELONA	3.57.08	3.57.92	4.00.20	4.00.59	4.01.91	4.02.03	3:59.95
7.	1996	ATLANTA	4.03.02	4.03.56	4.03.79	4.03.91	4.05.90	4.05.92	4:04.35
8.	2000	SYDNEY	4.05.27	4.05.33	4.06.42	4.06.49	4.08.02	4.08.30	4:06.63
9.	2004	ATENA	3.58.59	3.59.05	3.59.10	3.59.27	4.00.15	4.00.67	3:59.47
10.	2008	BEIJING	4:01.78	4:02.10	4:02.71	4:03.19	4:03.58	4:04.86	4:03.03
11.	2012	LONDRA	4:10.74	4:10.90	4:11.03	4:11.26	4:11.58	4:12.64	4:11.05