

The dynamics of the swimming speed of the participants in the “24 Aquamasters” swimming marathon

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Abstract

With the occasion of the World Water Day (22 March 2012), at the initiative of the Timisoara Masters Swimming Club, a unique event was organised: a swimming marathon dedicated exclusively to masters swimmers i.e. adults who practice swimming as amateurs. The event represented a national first, as it was the first masters swimming marathon ever to be organised in Romania. Besides a short presentation of the event, through the present paper we aim to study the impact of the factors that influence sportive performance on the participants in such a competition.

Key words: *swimming, marathon, masters, time, speed*

Rezumat

Pentru a celebra Ziua mondială a apei (22 martie 2012), la inițiativa Clubului de Înot Masters Timișoara, a fost organizat un inedit eveniment, un maraton de înot dedicat exclusiv înotătorilor masters, adică persoanelor adulte care practică înotul ca amatori. Evenimentul a reprezentat o premieră națională, fiind primul maraton de înot masters organizat în România. Pe lângă o scurtă prezentare a evenimentului, prin lucrarea de față dorim studierea impactului pe care îl au factorii ce influențează performanța sportivă, asupra participanților la acest tip de competiție.

Cuvinte cheie: *înot, maraton, masters, timp, viteză*

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The Timisoara Masters Swimming Club, in collaboration with the Physical Education and Sports Faculty from the West University of Timișoara, the County Directorate for Youth and Sports and Timisoara City Hall, organised between March 17 and March 18 2012 at the swimming pool (25 meters) from the “Bega” sports complex of Timisoara, the “24 Teamwork was employed in the competition, each team being formed out of 8 active athletes and 2 reserves (optional), each active athlete swimming 30 minutes in each round (4 hours), the total time of swimming for a participant being a maximum of 3 hours. (1)

Aquamasters” swimming marathon. The event was organised to celebrate World Water Day (March 22) and was the first marathon of masters swimming organised in Romania. The masters swimming movement encompasses people over 18 years of age that practice swimming as amateurs.

The event took place over 24 hours, the starting signal being given on Saturday, March 17 at 1 pm and the finishing signal was given Sunday, March 18 at 1 pm. Three teams were present at the starting line; in the 24 hours of the event the athletes swam over 223 km (figure 1). (2)

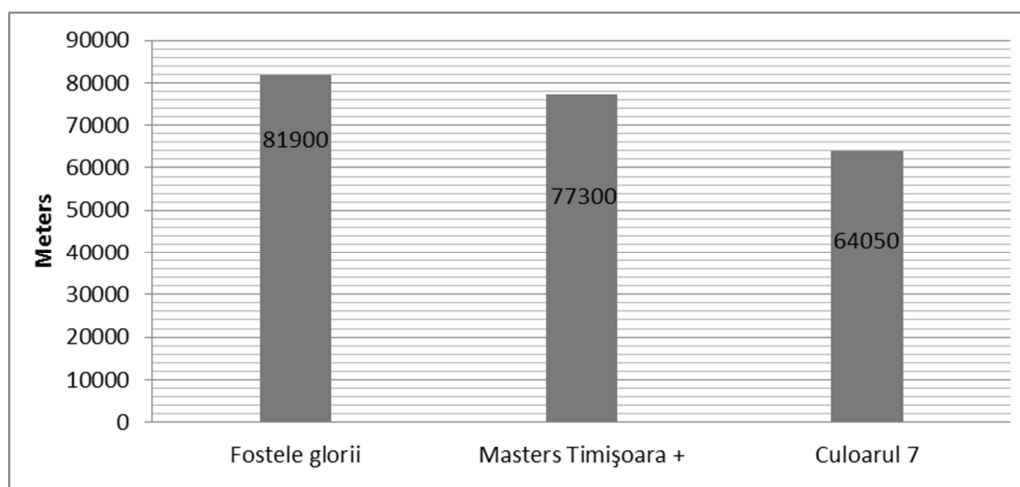


Figure 1. Swimming distance (3)

The team “Fostele glorii” (“Former Glories”) was composed of 12 people (with the consent of the organisers), totalising 81900 meters swam. The team “Masters Timisoara +” was composed of 10 people, totalising 77300 meters swam. The team “Culoarul 7” (“Lane 7”) was composed of 10 persons, totalising 64050 meters swam. (2)

32 people took part in the competition, out of whom 23 male and 9 female participants.

The age category best represented was, in the case of the men, the one between 30 and 34 years of

age, with 7 participants; in the case of the women, the age category between 25 and 29 was best represented, with 4 participants (fig. 2). The average age of the members of the “Fostele glorii” team was 27,8. The average age of the members of the “Masters Timisoara +” team was 39,6. The average age of the members of the “Culoarul 7” team was 31,1. The average age of all the participants was 32,8.

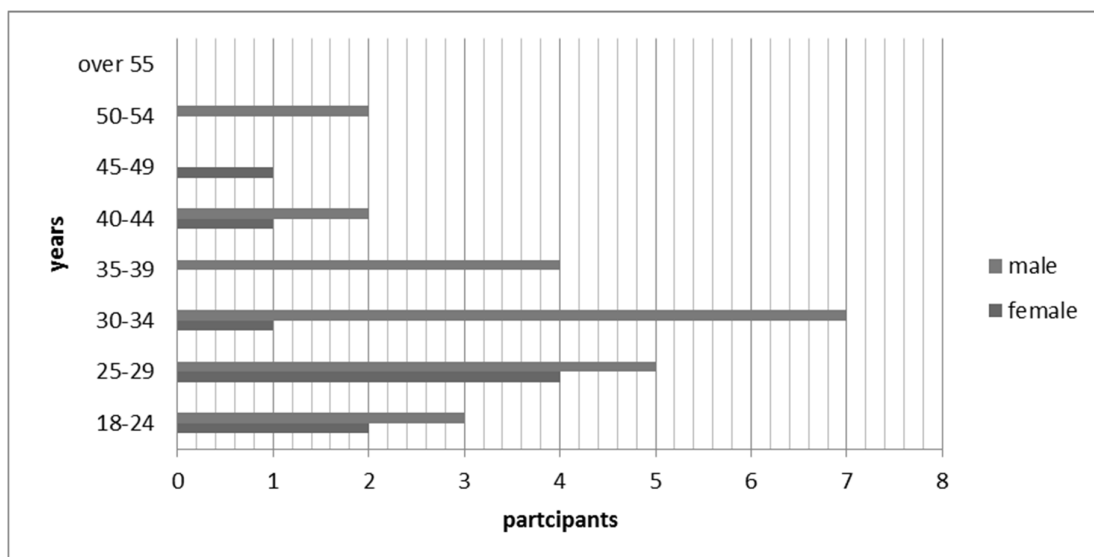


Figure 2. Participants – age categories (2)

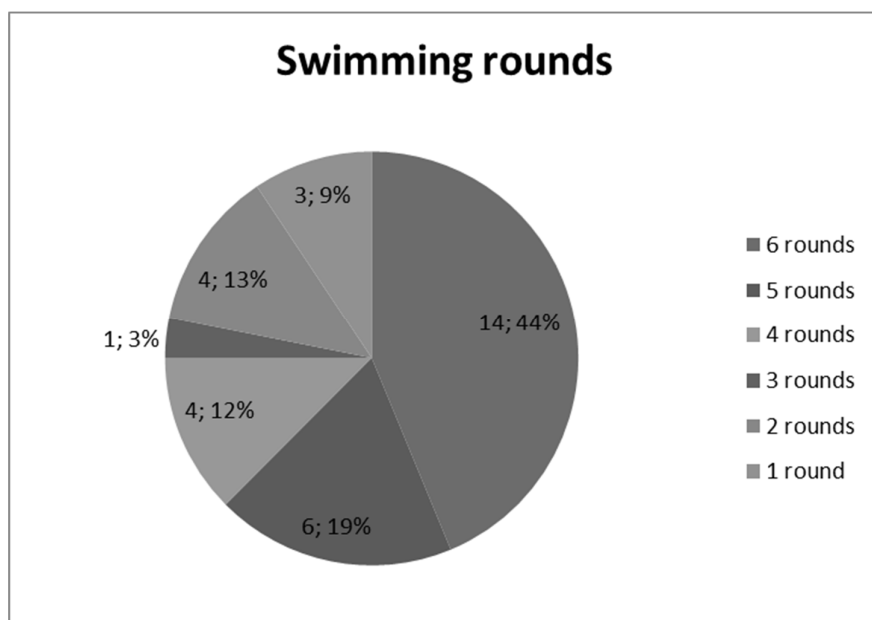


Figure 3. Swimming rounds (3)

As regards the number of swimming rounds (fig. 3), 14 participants (44%) swam in all the 6 rounds, each cumulating 3 hours of swimming. 6 participants (19%) swam 5 rounds, each cumulating 2,5 hours of swimming. 4 participants (12%) swam 4 rounds, each cumulating 2 hours of swimming. A single participant swam 3 rounds, cumulating 1,5 hours of swimming. 4 participants (12%) swam 2

rounds, each cumulating 1 hour of swimming. 3 participants (9%) swam only one round of 30 minutes.

Out of the total of 223250 meters swam during the event, 136600 meters (61%) were swam by the 14 participants who took part in all the 6 rounds of the marathon.

Seeing as the event was the first swimming marathon to be organised in Romania dedicated exclusively to the masters category i.e. people over the age of 18 who practice swimming as amateurs, we aim through the present paper, besides briefly presenting the event, to study the impact of the factors that influence sportive performance on the participants in this type of competition.

The performance accomplished by the participants in the marathon can be translated through swimming speed i.e. the average time registered on the distance of 100 meters (TM). We are less interested in the speed of swimming as an effective value as we are by its variation from a round to another. Thus, in order to analyse the dynamics of the swimming speed of the participants in the event, we will calculate the average time registered for each swimming round. In order to improve efficiency, we will analyse the variation of the average times of the participants who swam in all the rounds of the event (14 persons).

Table I presents the TM values, achieved during each round by the 14 swimmers who took part in all the 6 rounds of the marathon. The difference between the weakest average time (WT) and the best average time (BT) is depicted in the last column.

As regards the influence of the rounds' timetables on the TM values, we can notice that 8 out of 14 participants (57%) have obtained the best average time in the first 2 rounds (round 1 and round 2). 11 out of 14 participants (78%) have registered the weakest average time of swimming in the last 2 rounds (round 5 and 6).

As regards the influence of the rounds' timetables on the average swimming time (fig. 3), we can notice that 8 out of 14 participants (57%) have obtained the best average time in the first two rounds (round 1 and 2), rounds which took place Saturday between 13:00 and 21:00.

Table I. Swimming time - average

Subject	TM - Swimming time - average/100 meters (min:sec,dec)						WT-BT
	Round 1	Round 2	Round 3	Round 4	Round 5	Round 6	Sec
RM	01:19,5	01:19,4	01:20,6	01:21,2	01:21,8	01:22,8	3,4
CC	01:44,0	01:39,9	01:40,9	01:39,6	01:38,9	01:40,4	5,1
MV	01:30,7	01:29,6	01:31,3	01:34,0	01:34,4	01:29,1	5,3
GS	01:36,1	01:37,1	01:36,4	01:37,7	01:39,6	01:41,6	5,4
CCa	02:13,2	02:12,8	02:09,0	02:12,4	02:06,3	02:10,2	6,9
TA	01:47,8	01:49,6	01:53,3	01:54,9	01:55,0	01:56,9	9,1
LM	01:37,0	01:36,4	01:37,0	01:41,6	01:45,7	01:45,4	9,3
RM	02:04,7	02:05,5	02:09,8	02:11,5	02:13,2	02:09,5	9,5
GA	01:58,6	01:53,8	01:55,7	01:57,7	02:02,4	01:59,4	9,6
LC	01:40,3	01:42,5	01:44,8	01:46,1	01:50,9	01:47,3	10,6
BF	01:46,6	01:46,2	01:52,6	01:49,8	01:57,0	01:57,4	11,2
FR	03:02,4	02:59,7	02:57,2	03:02,3	03:08,6	03:04,7	11,4
SL	01:32,3	01:34,7	01:29,9	01:44,3	01:37,7	01:36,7	14,2
SC	02:39,1	02:40,6	02:42,0	02:44,6	02:53,2	02:37,9	16,3

11 out of 14 participants (78%) have registered the weakest average time in the last 2 rounds (rounds 5 and 6), rounds which took place Sunday, between 5:00 and 13:00 (figure 4).

In the graph from figure 5 the average times of swimming on the distance of 100 meters (TM) for the best 10 participants who swam in all the rounds of the competition. One can notice that the dynamics

of the swimming speed varies between one case and another (figure 5).

The variation of the TM values recorded over the 6 rounds is given by the difference noted between the weakest and the best time. The lowest variation of the TM values was 3,4 seconds, and the highest was 16,3 seconds (figure 6).

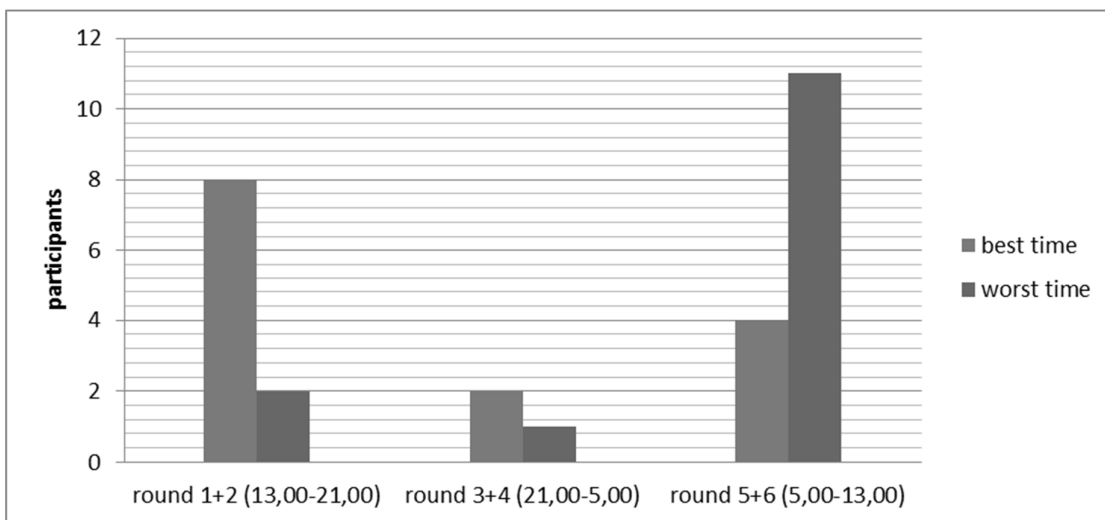


Figure 4. Best/worst swimming time in rounds

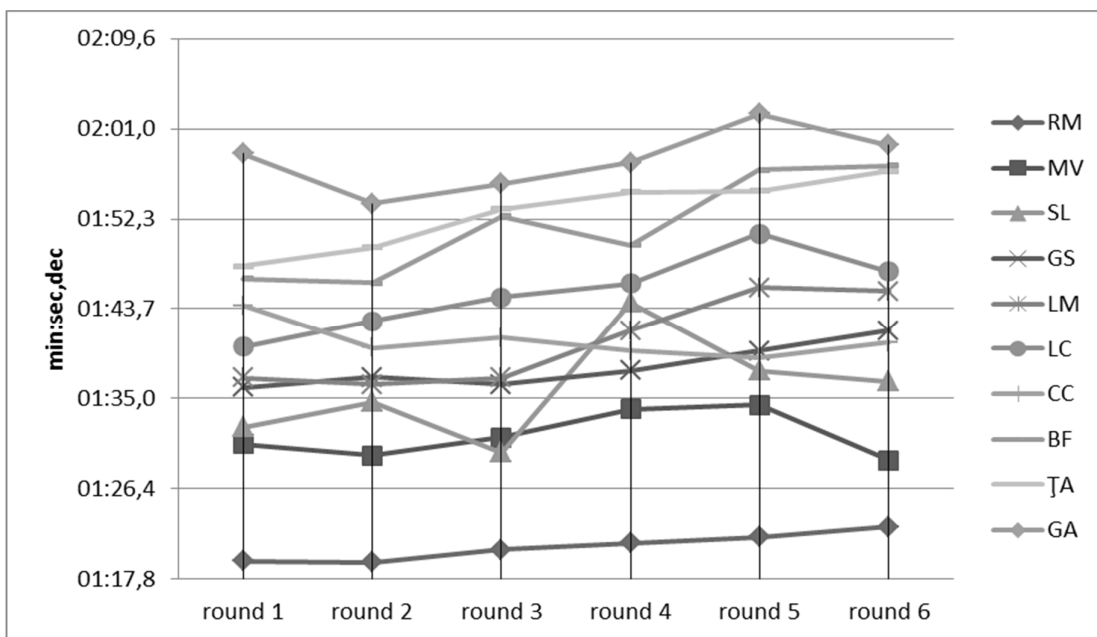


Figure 5. TM - swimming time average/100m

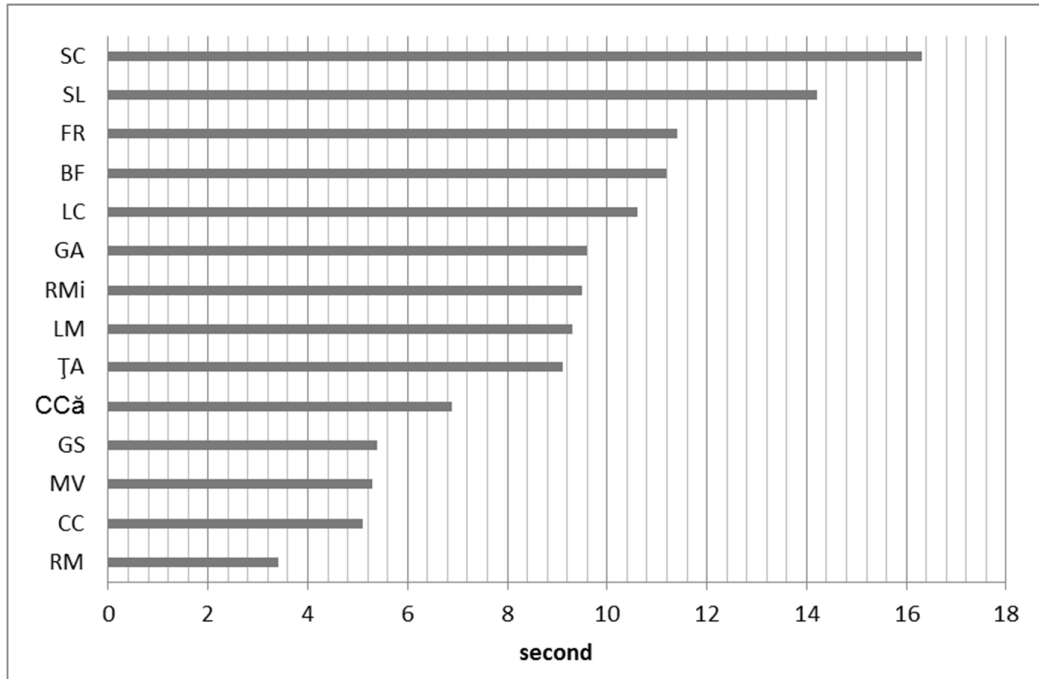


Figure 6. Swimming time average variation

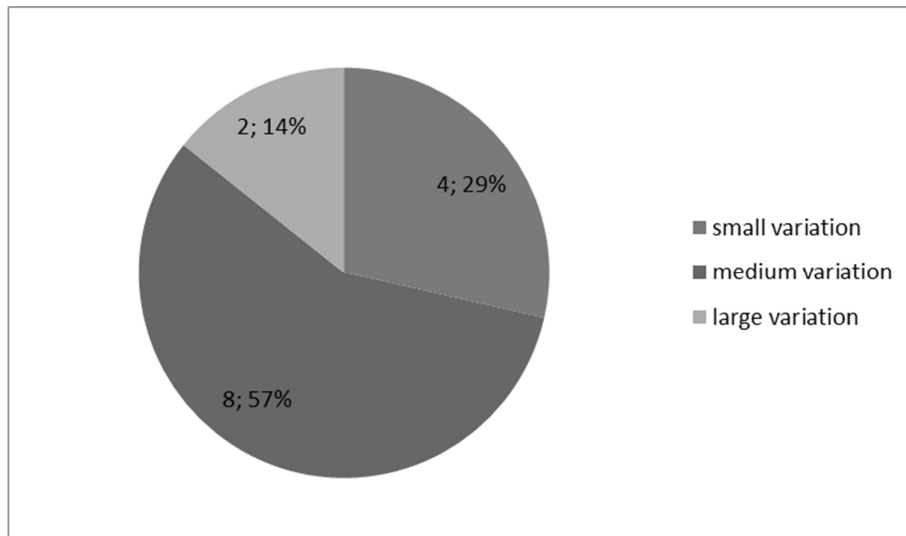


Figure 7. Swimming time average evaluation

In order to evaluate the variation of the TM values, we may take into consideration the following categories: low variation (0-6 seconds); average variation (6-12 seconds); high variation (12-18 seconds). 4 subjects (29%) registered a low variation of the TM values, 8 subjects (57%) registered an

average variation of the TM values and 2 subjects (14%) registered a high variation of the TM values. As opposed to the classic competitions of masters swimming, the special character of a swimming marathon is given by the higher variety of the factors that influence the participants' performance. Thus,

besides the specific preparation necessary for this type of event, in our opinion, the main factor which influences sportive performance is the accumulation of fatigue, which appears due to the effort made during swimming and the short time available for the organism to recuperate after such an effort.

In conclusion, we may state that the majority of the subjects had a higher swimming speed at the beginning of the competition, in the first 2 rounds; the speed lowered towards the end of the competition, in the final 2 rounds.

Regarding the variation of the swimming speed, the better prepared the organism of the participant is for the type of effort required for a swimming marathon and the better the capacity of the organism to adapt to stress factors (fatigue, sleeplessness, partial recuperation, etc.), the smaller the variation of the swimming speed shall be. In the case we have just studied, the majority of the subjects have registered

an average variation of the swimming speed, with only 4 subjects registering a lower variation of the swimming speed.

We advise participants in this type of competition, besides specific preparation linked to swimming technique and development of the aerobic resistance, to adopt means through which they may counteract the negative effects of the accumulation of fatigue: rest before the competition and between swimming rounds, relaxing message after each swimming round, scheduling the swimming rounds according to their own biorhythm, appropriate nutrition and hydration.

References

1. <http://www.timisoara.inot-masters.ro/24-aquamasters-editia-f-a/> [April 15 2012]
2. <http://www.inot-masters.ro> [April 15 2012]
3. *** arbitration records of the "24 Aquamasters" swimming marathon, first edition