

Comparison of Rally Time in XXIX Beijing (2008) and XXVIII Athens (2004) Olympic Table Tennis Tournaments

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Abstract: The XXIX Olympic games of Beijing (2008) are the second Olympic tournaments organized under the modification of Table Tennis regulations (series of two serves, 11th points set). The purpose of this study was to compare the rally time of the Beijing (2008) and Athens (2004) Olympic tournaments. Rally time differences for Men and Women in both Olympic tournaments concerning the first round up to the quarter finals were also studied. The sample of the study was the total number of single games that were held during the Olympic Games in Beijing (n=119, male=60 & female=59). The results showed that rally time oscillated from 4:48'' to 7:31'' in total. Men's rally time in set fluctuated from 4:48'' to 5:33'' and Women's from 5:00'' to 7:31''. The two factors repeated measures analysis of variance (Olympic tournaments x rounds) was used in order to determine if significant variance existed between Olympic tournaments. The analysis of data revealed that Women's set rally time increased in Beijing (2008). Significant differences were found for Women in Olympic tournaments ($p < 0.05$) and also in the first three rounds of the Beijing Olympic Tournament ($p < 0.05$). These findings indicate that longer rally time in table tennis should be taken in consideration and should be examined more in next high level tournaments especially after the prohibition of speed glue. Thus, knowledge of the above characteristics can help coaches to provide the appropriate methods for table tennis training.

Keywords: Rally time, Olympic tournaments, Match analysis.

Introduction

Olympic Tournaments are organized every four years. Men and Women who compete in those tournaments are classified among the high level ones. Olympic matches are usually analyzed in every detail, which shows the importance of this tournament.

The XXIX Beijing (2008) was the second Olympic Table Tennis Tournament which was organized after the 2001 International Table Tennis Federation (I.T.T.F) modification of rules (series of two serves, 11th points set). XXVIII Athens (2004) was the first Olympic Tournament during which I.T.T.F. new rules were established. Numerous of tournaments at all levels and in all categories have been played by both Men and Women using the same rules between the last two Olympic tournaments which might mean that players got accustomed to the use of these regulations.

According to the I.T.T.F. regulations [1], “A rally is a period during which the ball is in play” and “the ball is in play from the last moment at which it is stationary on the palm of the free hand before being intentionally projected in service until the rally is decided as a let or a point”. The duration of rallies can be a very important indicator regarding physical training in table tennis while adaptation to changes of new rules is in correlation with training technology [2].

Beijing (2008) Table Tennis Olympic tournament rally time seems to be longer compared to that of Athens (2004). These findings should be taken in consideration and should be examined more thoroughly in next high level tournaments especially after the prohibition of speed glue.

Methods

The total number of games that were held during the Olympic Games in Beijing (n=119), in Men (n=60) and Women (n=59) singles from groups to quarter-finals was used as a sample. Data was received from the official “Beijing 2008” web page <http://en.beijing2008.cn> and

from www.nbcolympics.com. DVD and video tapes verification was also conducted.

The process of data collection was the following: each time an athlete was in service position and simultaneously with throw of the ball, a digital chronometer was placed in use. The Rally time was recorded until the point ended. Time data collection was conducted with precision of seconds for set and minutes for games and was recorded on to special result form. No data collection was recorded in other cases of the game being interrupted. No other factors such as time-out, changes of table side between sets were counted.

Results

The two factors repeated measures analysis of variance (Olympic tournaments x rounds) was used in order to determine if significant variance existed between

Table 1. Beijing 2008 Men Rally Time

Men	Rally Time MAX	Rally Time MIN	Set/Round (X±SD) SEC	Match/Round (X±SD) SEC
1st Round	37:24	15:55	5:00±00:37	28:47±07:17
2nd Round	40:03	19:59	05:04±00:42	29:53±06:11
3rd Round	50:16	18:56	05:33±01:05	30:23±10:26
4th Round	26:24	17:40	04:54±00:55	26:24±09:56
5th Round	31:57	16:41	5:06±00:58	23:11±06:24
	Games Max	Games Min	Mean/Set	Mean/ Match
Total	50:16	15:55	5:06±00:17	27:31±03:07

Olympic tournaments. The analysis of data revealed that Women’s set rally time increased in Beijing (2008).

Significant differences were found for Women in Olympic tournaments ($p<0.05$) and also in the first three rounds of the Beijing Olympic Tournament ($p<0.05$). Mean time of rallies in Men is 5:06’±00:17’ in sets and 22:31’±3:07’ in games (table 1) while in Women it is 5:47’±1:01’ in set and 32:23’±5:22’ in games.

Concerning the duration of the Beijing Olympic tournament the longest matches lasted 50:16’ for Men

Table 2. Beijing 2008 Women Rally Time

Women	Rally Time MAX	Rally Time MIN	Set/Round (X \pm SD) SEC	Match/ Round (X \pm SD) SEC
1st Round	46:28	16:06	5:00 \pm 00:51	28:15 \pm 09:39
2nd Round	40:09	19:53	05:33 \pm 01:09	30:27 \pm 09:04
3rd Round	42:14	18:35	05:45 \pm 01:04	27:26 \pm 07:14
4th Round	1:03:40	19:51	07:31 \pm 01:50	40:01 \pm 14:46
5th Round	47:31	25:58	5:06 \pm 00:58	35:48 \pm 10:22
	Games Max	Games Min	Mean/Set	Mean/ Match
Total	1:03:40	16:06	5:47 \pm 1:01	32:23 \pm 5:22

and 1:03:40'' for Women while the shorter one was 15:55'' for Men and 16:06'' for Women.

Tables 1 and 2 show the detailed rally time for each round, the Longer and Shorter match in tournament, Standard deviation per round for set and matches and mean per set/ match in five analyzed rounds.

Men rally time in Beijing (2008) compared to that in Athens (2004) is longer in set/ matches in almost every round fig. (1-2).

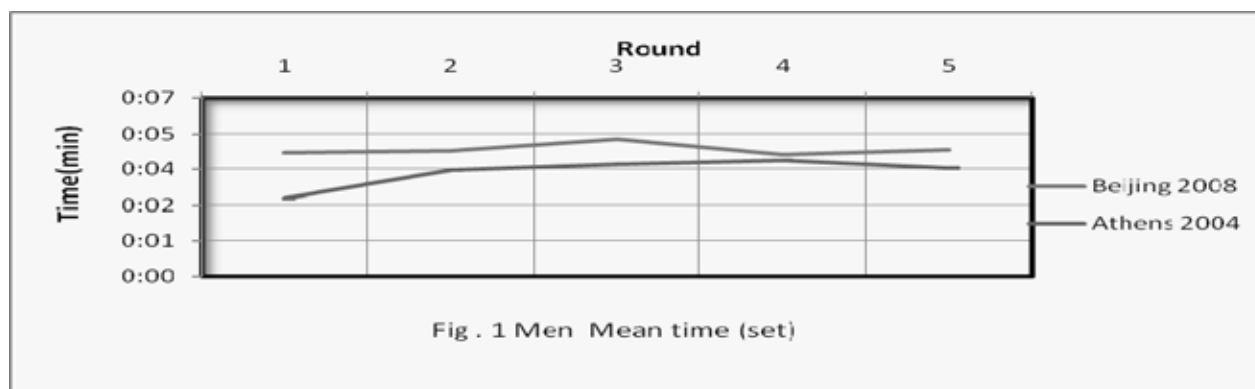


Fig.1 Rally time per round (set)

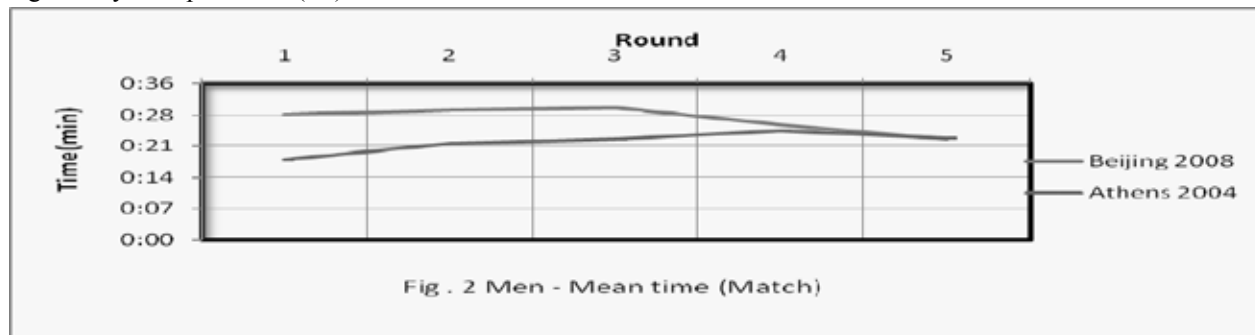


Fig.2 Rally time per round (match)

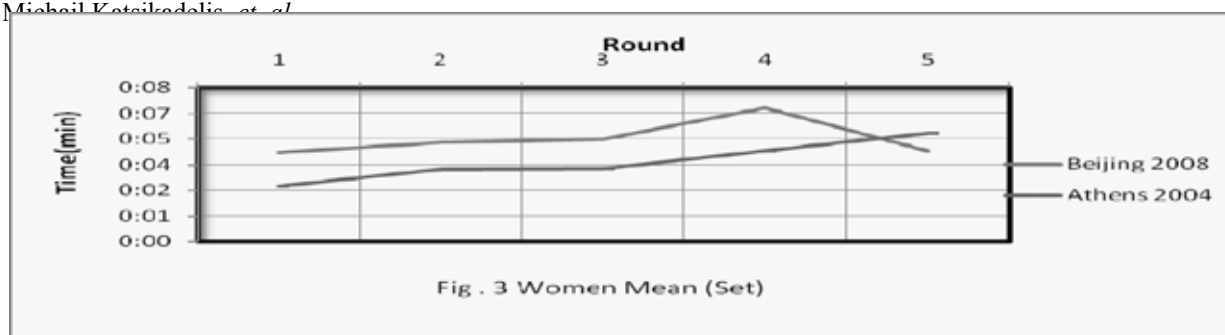


Fig.3 Rally time per round (set)

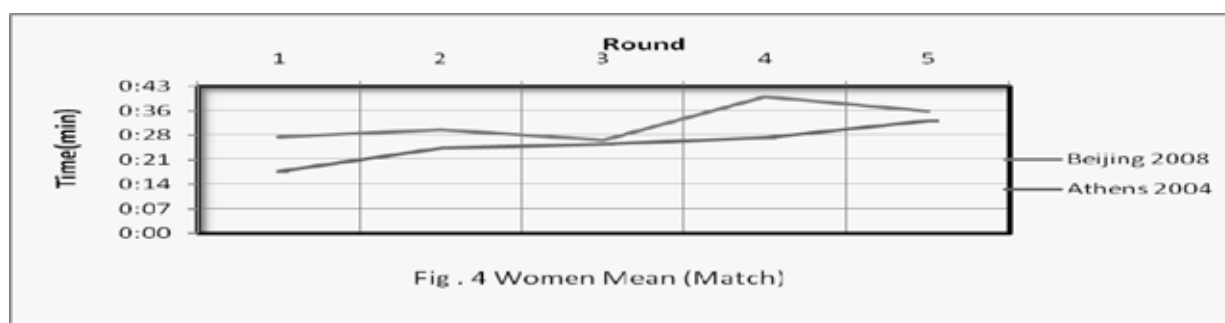


Fig.4 Rally time per round (match)

Women's rally time in Beijing tournament is longer compared to that in the Athens Olympic tournament Fig (3-4).

Discussion

From the analysis of the results it was obvious that the rally time in both Men and Women was longer in the Beijing (2008) Olympic Tournament compared to Athens (2004). Match rally time was increased up to the third round for Men and up to the fourth round for women in the Beijing Olympic Tournament.

Men's Beijing (2008) rally time was slightly longer in relation to the one in Athens (2004). The time difference was not statistically important even though it is noticeable that the mean of the set/match rally time is longer in Beijing (2008) in the first three rounds. After the 4th round, the mean of the rally time is almost the same as the one in Athens. This could be due to the fact that Men adapted faster to the new I.T.T.F. rules.

Statistically, a significant difference was achieved in Women rally time in the first three rounds of the Beijing tournament. The rally time got longer up to the fourth round. This might be accounted to single elimination system of play which means that more advanced players

"meet" each other after a few rounds [3]. Every new round in Beijing (2008) was longer in the mean of the rally time except for the 3th round which might be accidentally shorter in the mean of the match rally time.

Results show a statistically significant difference in Women rally time between two tournaments. Beijing (2008) rally time was longer compared to that of Athens (2004). This might mean that women's rally takes longer time and a point is not easy to finish. Concerning the corresponding studies that are reported [4, 5, and 6]; there is an increase in rally time with the new 40mm ball which is more obvious in Women's games. This increase was also noticed in the first Olympic tournament with the new regulations. However, we must take into consideration that the style of women's play can be a decisive factor in the duration of games [7].

Concluding, we would like to stress that it was not easy to compare the findings of this study since there are not enough bibliography reviews of rally time. Of course more research is needed in order to obtain more valid results. However, the new glue rules regulation might affect rally time also.

The next target is the realization of new measurements and greater range of tests, to act in a consultative manner

and in relation to the fact that training is what plays the main role as well as the will of trainees to achieve better results. Rally time should be taken into consideration during the training procedure.

REFERENCES

- [1] The Laws of Table Tennis. *I.T.T.F. Regulation Handbook*, 2.5.1. p.24
- [2] Djokic, Z. ITTF scored a goal (changes of rules in table tennis during 2000-2003). 10th ITTF Sport Science Congress, Zagreb, 2007
- [3] Katsikadelis, M., Pilianidis, T., & Vasilogambrou, A. Real play time in table tennis matches in the XXVII Olympic Games "Athens 2004". 10th ITTF Sport Science Congress, Zagreb, 2007
- [4] Takeuchi, T. The effect of the 40mm diameter ball on table tennis rallies by elite players. *Table Tennis Sciences* no 4&5. 26,267-277, 2001
- [5] Seve, C. A propos de la balle de 40mm. *France Tennis de Table Magazine*, 758, 12-13, 2001
- [6] Zhang, X. A technical investigation into the ITTF Large Ball Tournament in Suzhou. *Table Tennis Sciences* no 4&5. 6, 55-58, 2001.
- [7] Tang, H., Mizoguichi, M., Toyoshima, S. Speed and spin characteristics of the 40mm table tennis ball. *Table Tennis Sciences* no 4&5. 27, 278-284, 2001.